United States Environmental Protection Agency: Region 5

Draft Air Pollution Control Title V Permit to Operate
Issued to Veolia ES Technical Solutions, L.L.C., 7 Mobile Avenue, Sauget, Illinois
Permit No. V-IL-1716300103-2014-10; Issued October 2014

Docket ID No. U.S. EPA-R05-OAR-2014-0280

Comments of Veolia ES Technical Solutions, L.L.C.

December 17, 2014

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I. Introduction

Veolia ES Technical Solutions, L.L.C. ("Veolia") operates a commercial hazardous waste incineration facility in Sauget, Illinois. Veolia's facility is subject to regulation under the Clean Air Act ("CAA") and must maintain a valid operating permit to carry on its business. Although most facilities like Veolia's are permitted by state agencies with delegated authority under the CAA, Veolia is permitted by the USEPA, and more specifically, USEPA Region 5 located in Chicago ("Region 5"). As set forth in detail in Part II below, Veolia and Region 5 have had a complex and sometimes difficult relationship. Region 5 issued Veolia's first Title V operating permit in September of 2008. That initial permit was good for five years. Pursuant to Title V, Veolia applied for a renewal to its operating permit in April of 2013. In October of 2014, Region 5 issued a draft permit to Veolia ("2014 Draft Permit") that is the subject of these comments.

Veolia needs a valid Title V permit to continue its operations. Thus, Veolia appreciates Region 5's consideration of Veolia's renewal application and Region 5's issuance of the 2014 Draft Permit. However, a renewed permit does not do Veolia any good if it is so onerous—particularly when compared to the permit obligations of Veolia's direct competitors in Region 5—as to threaten the continued viability of Veolia's current business.

Under accepted administrative law principles, an agency's permitting decision is arbitrary and capricious "if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983); *see also Luminant Generation Co., L.L.C. v. U.S. E.P.A.*, 675 F.3d 917, 925 (5th Cir. 2012). As set forth in detail in Veolia's comments below, Region 5's permitting decision, and the conditions of the 2014 Draft Permit, are arbitrary and capricious under this standard.

Region 5 should withdraw, delete, amend, further explain, and otherwise revise the conditions of the 2014 Draft Permit and its accompanying supporting documents as set forth below to ensure that Veolia ultimately receives a final operating permit that is considered, reasonable, and fair.

II. Facts in Support of Veolia's Comments

A. Brief Overview of HWC MACT Development and Iterations

Hazardous Waste Combustors ("HWCs") are regulated under § 112 of the Clean Air Act ("CAA"). HWCs include the following hazardous-waste burning sources: incinerators, cement kilns, lightweight aggregate kilns, boilers, process heaters, and hydrochloric acid production furnaces. EPA first proposed air-emission rules for hazardous waste incinerators like Veolia in 1981 under their RCRA authority. *See* 40 C.F.R. Parts 264 & 265. In 1999, EPA issued the first Maximum Achievable Control Technology ("MACT") rule for certain HWCs, including hazardous waste incinerators. *See* 64 Fed. Reg. 52,828 (Sept. 30, 1999). The air emission sources under the 1999 HWC MACT are referred to as "Phase I" sources. The 1999 HWC MACT set air emission limits for numerous hazardous air pollutants ("HAPs"), including: dioxin/furans, mercury, semi-volatile metals ("SVMs"), low-volatility metals ("LVMs"), hydrogen chloride and chlorine gas.

Shortly after USEPA issued the 1999 HWC MACT, industry and environmental groups challenged the rules for diverse reasons. On July 24, 2001, the United States Court of Appeals for the District of Columbia Circuit vacated the rules. However, before doing so, the Court allowed USEPA to promulgate interim standards. On February 13, 2002, the Agency published interim standards to regulate air emissions from Phase I HWCs until permanent replacement standards could be developed and finalized. *See* 67 Fed. Reg. 6,792 (Feb. 13, 2002). As part of this process, USEPA also entered into a settlement agreement with the challenging parties to issue standards for both Phase I and Phase II sources by September of 2005.

USEPA published a revised HWC MACT rule for public comment on April 20, 2004. *See* 69 Fed. Reg. 21,198 (Apr. 20, 2004). The Agency published the final "replacement" HWC MACT in October of 2005. *See* 70 Fed. Reg. 59, 402 (Oct. 12, 2005). The 2005 HWC MACT included HAP limits for both Phase I and Phase II sources of emissions. In 2005 and 2006, the cement-industry filed petitions to reconsider certain aspects of the rule as applied to cement kilns. The granted one of these petitions in March of 2006; however, the issue was subsequently resolved without further amendment to the rule. All hazardous waste incinerators had to show they were in full compliance with the requirements of the 2005 HWC MACT by October 14, 2008.

B. Basics of HWC MACT Implementation and Compliance

USEPA created the HWC MACT emissions limits for hazardous waste incinerators using the "MACT floor" process authorized by § 112(d) of the Clean Air Act ("CAA"). The process is called the "MACT floor" because it determines a baseline limit of emissions. The MACT limits can be more stringent than this limit, but cannot be more lenient—hence the "floor." To implement the MACT floor for incinerators, USEPA constructed a database of existing incinerators subject to the rule. USEPA then ranked each incinerator based on the results of performance tests—i.e., actual sampling of HAPs being emitted from the incinerator's stacks during certain test conditions. The Agency then selected the top 12% of performers from the database (those with the lowest emissions during tests). From this subset, USEPA then calculated the average emission level. USEPA then set this average emission level as the MACT

floor. Thus, the HAPs emission limit for hazardous waste incinerators, including those for metals—mercury, LVMs, and SVMs—are based on actual emissions achieved during performance testing. *See generally* 70 Fed. Reg. at 59,419; Office of Air Quality Planning & Stnds., EPA, Guidelines for MACT Determinations under § 112(j) Requirements (Feb. 2002) *at* www.epa.gov/ttnatw01/112j/guidance.pdf.

In addition to playing the central role in creating the emissions limits under the HWC MACT, performance tests also are the primary method by which sources verify compliance with the standards. Under 40 C.F.R. § 63.1206(b)(2) and § 63.1207, sources are required to conduct comprehensive performance tests to "demonstrate compliance with the emission standards ... [and] ... establish limits for ... operating parameters." *See* 40 C.F.R. § 63.1207(b). Veolia and other hazardous waste incinerators run comprehensive performance tests ("CPTs") every five years to ensure their emissions are under the emissions limits. They also use the test data from the CPT to calculate operating parameter limits ("OPLs") that they use to govern the operation of the incinerator in the time between tests. Through the CPT process, the OPLs are set at a level that ensures that the incinerator will not exceed the emission limits. A "feedrate" limit is one of several OPLs because it dictates how much waste can be fed into an incinerator over a given time period. For example, Veolia's OPL for mercury for Unit No. 4 is .040 lbs/hour (measured over a 12-hour rolling average). Thus, at Unit No. 4, Veolia cannot incinerate waste containing more than .040 pounds of mercury in any given 12 hour period.

To comply with its OPLs, a source must also analyze the waste before it is burned to determine its makeup. This process is carried out under 40 C.F.R. § 63.1209(c), which provides: "Prior to feeding the material, you must obtain an analysis of each feedstream that is sufficient to document compliance with the applicable feedrate limits." 40 C.F.R. § 63.1209(c)(1). The analysis process is directed by a source's feedstream analysis plan ("FAP"). *See id.* §63.1209(c)(2). A source's FAP must specify:

- The parameters that will be used to analyze each waste stream;
- Whether the analysis will come from sampling or from other information about the waste (such as generator knowledge);
- How the data will be used to ensure compliance with the OPLs;
- What test methods will be used to analyze the waste;
- How the samples will be taken; and
- How often the sampling and analysis will be repeated.

See id. § 63.1209(c)(2)(i)-(vi). In short, the FAP sets up the protocol for sampling and analyzing waste streams so that the incinerator operator knows what the waste contains and therefore can make sure to burn the waste in accordance with the OPLs.

C. Basics of the Title V Operating Permit Program

Title V of the 1990 Amendments to the Clean Air Act required the establishment of a nationwide air emissions operating permit program ("the Title V Program"). *See* 42 U.S.C. §§ 7661–7661f; 40 C.F.R. parts 70–71. The Title V Program was created to incorporate all of the CAA requirements appliable to an air emissions source into a single document. The original goal of

the Title V program was to have each state develop their own permit program that complied with the provisions of 40 C.F.R. part 70. The "Part 70 Rules" set up the requirements for states to follow and tasked individual sources with applying to their appropriate state permitting authority for a Title V permit to operate. While almost all states run Title V permit programs that are approved by the Agency, USEPA maintained the authority to act as the permitting authority in certain circumstances. The Agency proposed rules to carry out this permitting function in 1996 and finalized them in 1999. *See* 64 Fed. Reg. 8,247 (Feb. 19, 1999). These rules were codified in 40 C.F.R. part 71 ("Part 71 Rules") and are analogous to the Part 70 requirements.

Importantly, the Title V Program was created to collect all of the emission limits, standards, and record-keeping, monitoring, and reporting requirements applicable to a source in one permit. The Title V Program was not created as a vehicle for imposing additional standards and the permitting authority cannot impose new substantive requirements under the guise of monitoring. *See Sierra Club v. EPA*, 536 F.3d 673, 675 (D.C. Cir. 2008). However, this particular part of the Title V Program—specifically, the question of when is it appropriate for the permitting authority to include additional monitoring requirements to "assure compliance"—has been very controversial. In fact, the USEPA has been on both sides of this issue. The Agency has proposed rules and guidance that supported a permitting authority's ability to add substantive permitting requirements[1] **and** has vigorously opposed the ability of a permitting authority to impose such requirements.[2] Only after a suit by the Sierra Club overturned the Agency's 2006 rule forbidding state permitting authorities from including additional monitoring requirements in Title V permits did the Agency adopt its current interpretation that such requirements are permissible under 40 C.F.R. § 70.6(c)(1) and § 71.6(c)(1). Yet, even under USEPA's current view, a monitoring requirement must be necessary to assure compliance to be valid. *See General Electric Lighting v. Koncelik*, No. 05AP-310 & 323, 2006 WL 832527 (Ohio Ct. App., Mar. 31, 2006).

D. The HWC MACT and Title V Do Not Require Region 5's Proposed Feedstream Analysis Procedures or Multi-Metals Continuous Monitoring Requirements

As set forth above, the HWC MACT provides the substantive emissions requirements that sources like Veolia have to meet, and the Title V Program collects those and all other applicable CAA requirements in one enforceable and comprehensive document—the operating permit. Veolia received its Title V operating permit from USEPA in 2008 and, as required by the Part 71 Rules, applied for a renewal of this permit in 2013. Region 5 has in this administrative action proposed a renewed draft permit for Veolia. In doing so, Region 5 has decided to include two additional sources of monitoring that were not included in Veolia's 2008 Title V permit: (1) a series of onerous additions to Veolia's Feedstream Analysis Plan ("FAP") and (2) the installation of a multi-metals continuous emissions monitoring system ("CEMS"). As detailed in the Parts

[1] *See* USEPA, Periodic Monitoring Guidance for Title V Operating Permits Programs (Sept. 15, 1998), *vacated by Appalachian Power v. EPA*, 208 F.3d 1015 (D.C. Cir. 2000).

[2] *See* Final Rule Interpreting the Scope of Certain Monitoring Requirements for State and Federal Operating Permit Programs, 71 Fed. Reg. 75,422 (Dec. 15, 2006), *vacated by Sierra Club v. EPA*, 536 F.3d 673, 675 (D.C. Cir. 2008).

that follow, these additional sources of monitoring are not set forth (or even mentioned) in either the HWC MACT or the Title V regulations, are not authorized by these standards, and are, in fact, wholly unnecessary to assure Veolia's compliance with the CAA and should be removed.

III. Facts in Support of Veolia's Comments

As noted above, prior to the HWC MACT Rule, HWC air emissions were primarily regulated under rules promulgated under RCRA. Generally, RCRA provides for "cradle-to-grave" management of hazardous wastes—from generation to storage to disposal. Because Veolia disposes of hazardous waste by incineration, RCRA controls how wastes at the facility are stored, analyzed, and fed into the incineration units. Upon incineration, wastes are converted into ash, which is regulated under RCRA, or into air emissions, which are regulated by the CAA. Because air emissions are generally controlled by monitoring or restricting how much and what types of waste are fed into the incinerators, there is overlap between the regulatory schemes. Therefore, USEPA promulgated the HWC MACT under the authority of both the CAA and RCRA. *See* 64 Fed. Reg. at 52,991.

In light of this regulatory background—i.e., the intertwining of the HWC MACT Rule requirements and RCRA—it is necessary to first understand Veolia's path through each of these regulatory processes over the past several years in order to properly consider and evaluate Veolia's comments on the Draft Permit. Thus, a chronology of Veolia's compliance is set forth in the sections below.

A. Relevant Regulatory and Procedural History Concerning Veolia's Title V Permit

1. *1995 through 2003: Initial Title V Application & Test Plans for MACT Compliance*

Veolia submitted its original Title V permit application to IEPA on September 7, 1995. Illinois Environmental Protection Agency ("IEPA") deemed Veolia's application administratively complete the following month, in October of 1995. Nearly eight years later, on June 6, 2003, IEPA finally issued a draft Title V permit for public comment. The public comment period on this draft permit ended on September 12, 2003, and IEPA sent a revised draft permit to the United States Environmental Protection Agency ("USEPA") on November 6, 2003, for review. USEPA did not issue any comments on IEPA's revised draft Title V permit. Harris Aff. at VES 008384.

In December of 2003, in compliance with the interim HWC MACT Rule, Veolia submitted a Comprehensive Performance Test and Continuous Monitoring System Performance Evaluation Test Plan ("2003 CPT Plan") to the IEPA and USEPA. The 2003 CPT Plan outlined the procedures for conducting Comprehensive Performance Tests ("CPTs") on Veolia's three incineration units—Units 2, 3, and 4. In addition to setting forth the CPT parameters for compliance with the HWC MACT, the 2003 CPT Plan included Veolia's proposal to use data-in-lieu and extrapolation of LVM, SVM, and mercury feedrates to establish its OPLs as expressly allowed under 40 C.F.R. § 63.1207(c)(2), for data-in-lieu, and under 40 C.F.R. §63.1209(n)(2)(vii) and 40 C.F.R. § 63.1209(l)(1)(v) for LVM/SVM and mercury feedrate

extrapolation, respectively. Veolia stated its intention to use data-in-lieu and extrapolation with the IEPA and USEPA during meetings held with both agencies on January 22, 2003, and April 24, 2003, and neither objected. Harris Aff. at VES 008384-008385.

2. *2004 through 2005: Sierra Club Suit vs. USEPA & Initial MACT Compliance*

On February 18, 2004, the Sierra Club petitioned USEPA,[3] pursuant to § 505(b)(2) of the CAA and 40 C.F.R. § 70.8(d), to make a decision on Veolia's Title V permit application. USEPA did not respond to the Sierra Club's petition.

On June 30, 2004, Veolia placed a Document of Compliance ("2004 DOC") in its Operating Record establishing its compliance with the HWC MACT Rule. The 2004 DOC also set forth information regarding the use of data-in-lieu and extrapolation to establish the Sauget Facility's OPLs. *See* 2004 DOC at VES 001918-002196.

The Sierra Club, on August 2, 2005, sued USEPA, once again seeking to force USEPA to make a decision on Veolia's Title V permit application. *See Sierra Club, et al. v. Johnson,* Case No. 05-C-4425 (N.D. Ill. Aug. 2, 2005), VES 004597-004628.

On September 28, 2005, Veolia submitted a Notification of Compliance with the HWC MACT Rule ("2005 NOC") for all three incinerators, utilizing data-in-lieu for previous test results on units 2, 3 and 4 and extrapolation to establish OPLs for LVMs, SVMs, and mercury. *See* 2005 NOC at VES 002197-002296. At this point, Veolia had not received any comment from either USEPA or IEPA regarding its submission of the 2003 CPT Plan. Rather, the first time any agency communicated with Veolia regarding the substantive portions of the 2003 CPT Plan was in April of 2006, as discussed below.

3. *2006 through 2007: Sierra Club Sues USEPA Again & USEPA Takes Over the Title V*

On February 1, 2006, pursuant to a consent decree between USEPA and the Sierra Club resolving the Sierra Club's August 2, 2005, lawsuit, USEPA partially granted the Club's petition and directed IEPA to reassess certain aspects of the draft Title V permit for Veolia that IEPA issued in 2003. Further, USEPA directed IEPA to issue a revised permit within 90 days.

On April 5, 2006, Veolia met with IEPA regarding Veolia's pending Title V permit. At that meeting, IEPA stated that Veolia had submitted sufficient information to document MACT compliance for incinerator Units 2 and 4. However, IEPA for the *first* time stated that it disagreed with Veolia's use of data-in-lieu to establish limits regarding incineration Unit 3. In addition, IEPA insisted that Veolia conduct performance testing on Unit 3 as soon as possible. Thus, in May and June of 2006, at significant additional expense due to the short time period

[3] Pursuant to § 505(b)(2) of the Clean Air Act, a petitioner is required to provide notice to the permittee of challenges under the Section. See 42 U.S.C. § 7661d(b)(2). However, the Sierra Club failed to provide Veolia any notice of its challenge.

allowed for testing by IEPA, Veolia performed MACT compliance testing on Unit 3 individually. Harris Aff. at VES 008385. This testing demonstrated that the unit met all applicable MACT standards, including those for LVMs, SVMs, and mercury. *See* Veolia's June 2006 Test Report for Unit 3 at VES 002297-002441.

IEPA failed to issue a revised Title V permit by the deadline specified in the USEPA/Sierra Club consent decree. In July of 2006, the Sierra Club again filed suit against USEPA in the United States District Court for the Northern District of Illinois in an attempt to force USEPA to issue a revised Title V permit to Veolia. *See Sierra Club, et al. v. Johnson,* Case No. 06-cv-4000 (N.D. Ill. July 27, 2006).

USEPA's answer to the Sierra Club's complaint was due on September 29, 2006. Two days before the answer was due, on September 27, 2006, USEPA issued its first Finding of Violation ("FOV") to Veolia. VES 004670-004679. The September 2006 FOV alleged violations of RCRA ("Resource Conservation and Recovery Act") and the CAA. Then, on the day the Agency's answer was due, September 29, 2006, USEPA notified Veolia by letter that USEPA would now be the Agency in charge of issuing Veolia's long-delayed Title V permit. *See* Mem. Op. & Order at 4, ECF No. 29, *Sierra Club, et al. v. Johnson,* Case No. 06-cv-4000 (N.D. Ill. May 21, 2007), attached as VES 004680-004688. USEPA subsequently attempted to dismiss the Sierra Club's claims as moot by arguing that the Agency had taken the action required by the CAA (and sought by the Sierra Club) by taking over the permitting action from IEPA. *See id.* However, the Court denied the Agency's motion to dismiss and ordered USEPA to report to the Court the date by which it would issue or deny Veolia's Title V permit. *Id.* at 9.

On October 23, 2006, Veolia met with USEPA regarding the September 2006 FOV. (The FOV did not require Veolia to submit a response or take other specific corrective action, rather it provided Veolia with an opportunity to meet with USEPA to discuss the allegations.) At the meeting, Veolia provided a significant amount of information specifically disputing the allegations contained in the FOV. At the conclusion of the meeting, USEPA personnel committed to providing a response to the information provided by Veolia. However, USEPA has never provided such a response to Veolia. Harris Aff. at VES 008385.

After taking over the Title V permitting authority, USEPA required Veolia to submit a new application for a Title V permit, including information related to Veolia's compliance with the MACT standards. USEPA set September 29, 2007, as the deadline for that application to be submitted. Harris Aff. at VES 008385-008386. However, in April of 2007 USEPA notified Veolia that it must submit the application by May 2, 2007, effectively shortening the remaining application period to one month. Harris Aff. at VES 008385-008386. Nevertheless, Veolia timely submitted a new Title V permit application on May 2, 2007. The application was deemed administratively complete on June 13, 2007. Harris Aff. at VES 008385-008386.

Subsequently, USEPA entered into a settlement agreement with the Sierra Club. Then, on June 18, 2007, the USEPA filed a notice with the Court stating that the Agency had decided to undertake a *de novo* review of Veolia's Title V permit application and would issue or deny the

Title V permit on or before November 2, 2008 (i.e., within 18 months of receiving Veolia's completed application).[4] *See* Notice Re. Federal Title V permit Proceedings at 2, ECF No. 44, *Sierra Club, et al. v. Johnson,* Case No. 06-cv-4000 (N.D. Ill. June 18, 2007), attached as VES 004689-004692.

4. *2008: Performance Testing for Metals & Issuance of Veolia's Title V Permit*

On February 22, 2008, USEPA issued the first of a series of §114 information requests to Veolia pertaining to Veolia's compliance with the HWC MACT Rule. *See* February 2008 Information Requests, at VES 002442-002460. Even though Veolia had demonstrated compliance with the MACT standards by using data-in-lieu and testing Unit 3 in 2006, the February 2008 Information Requests directed Veolia to submit a new CPT Plan in 45 days and conduct CPTs on all three incinerators by July 15, 2008 (i.e., perform stack testing for all MACT air pollutants by July 15, 2008). *See Id.* at VES 002450. The February 2008 Information Requests specifically prohibited Veolia from requesting to use data-in-lieu methodology under 40 C.F.R. § 63.1207(c)(2). *Id.* at VES 002450.

The February 2008 Information Requests also contained USEPA's first comments to Veolia concerning the 2003 CPT Plan—over four years after Veolia first submitted the Plan to the Agency. (40 C.F.R. §63.1207(e)(i)(A) directs the USEPA to notify an emission source of its approval or intent to deny a CPT Plan within 9 months of receiving it.) Upon receipt of the February 2008 Information Requests, Veolia entered into negotiations with the Agency regarding the infeasibility of developing the CPT plans, obtaining Agency approval, hiring a CPT contractor, completing CPTs on all three incinerators, and submitting final reports for the CPTs by July 15, 2008.

On March 3, 2008, USEPA sent a letter to Veolia enclosing a "preliminary" draft Title V permit and asking Veolia to submit any informal comments it had on the draft permit by April 15, 2008. *See* Veolia's March 3, 2008 Response at VES 004693-004694. USEPA also stated that it could not calculate OPLs (for mercury, LVMs, and SVMs) to include in the draft permit because of "flaws" the Agency allegedly identified in the data submitted by Veolia. USEPA further stated that these same alleged "flaws" were previously identified by IEPA and that IEPA had shared these with Veolia.

On March 10, 2008, Veolia submitted a formal written response to the February 2008 Information Requests. *See* Veolia's March 10, 2008 Response at VES 004695-004706. In its response, Veolia agreed to conduct the testing requested by USEPA but stated that it could not do so by July 15, 2008. Veolia further supported this assertion by attaching an affidavit from Craig Doolittle of ENSR Corporation (Veolia's stack-testing contractor) that provided that it was infeasible to plan and perform testing that would normally take a year or more, in less than five months.

[4] Since Veolia's application was deemed complete by USEPA in June of 2007, Veolia has paid Title V permit fees to both IEPA and USEPA annually.

On March 11, 2008, Veolia responded to USEPA's March 3, 2008, letter regarding the alleged "flaws" in Veolia's data. Veolia stated that IEPA had never advised Veolia of any "flaws" either during meetings held between Veolia and IEPA in April of 2006 or at any other time. Veolia further stated that it continued to believe in the accuracy and integrity of the data provided in support of its Title V application. *See* Veolia's March 11, 2008 Letter at VES 004708-004709.

In a meeting with USEPA on March 13, 2008, Veolia presented its concerns regarding the extremely short time period that it was given to complete the performance testing required by the February 2008 Information Requests. At the meeting, USEPA acknowledged that the schedule included in the February 2008 Information Requests was unrealistic in light of the time needed to plan, prepare, and perform the CPTs. Harris Aff. at VES 008386. Veolia agreed to propose an alternative, more practical, schedule and submit it to the USEPA. Veolia's proposed schedule stated that the CPTs would be completed between August of 2008 and April of 2009. *See* Veolia's March 21, 2008 email (transmitting Veolia's proposed CPT schedules) at VES 004710-004720. However, USEPA rejected the proposed schedule.

After further discussion and investigation by USEPA, Agency personnel decided that they did in fact have valid test data to develop OPLs for all three incinerators for the MACT emission standards for particulate matter ("PM"), HCL/Cl2, dioxins/furans, and DRE but wanted Veolia to conduct performance tests to develop OPLs for mercury, LVMs, and SVMs. In other words, USEPA limited the stack testing to just metals regulated under the HWC MACT Rule. This metals data would then be used by USEPA to issue a revised Title V permit. Veolia again expressed concern regarding the performance of this testing on three incinerators in a very compressed time period.

In an April 25, 2008, telephone conference call, Veolia was informed by USEPA that, in order to address the need to demonstrate compliance with the HWC MACT, Veolia had to choose either to complete the MACT metals testing as directed by the USEPA, pursuant to the Agency's very tight time frame, or alternatively to choose one of four options addressing MACT metals for inclusion in the Title V permit. The four options presented to Veolia were: 1) cease incinerating any wastes containing MACT metals; 2) install CEMS for mercury; 3) accept OPLs developed by USEPA (USEPA Land to assist USEPA Air); or 4) settle previously discussed compliance concerns with issue resolution incorporated into the Title V permit.[5] After negotiations, Veolia—although knowing that conducting performance testing within this expedited time period would be challenging and result in increased costs and, more importantly, increased risk of calculation error as a result of reduced QA/QC review time—chose, with the agreement of USEPA, to conduct the metals performance testing instead of one of the four alternatives presented by the Agency. Veolia agreed to expedite the delivery of the metals performance test plans and USEPA agreed to review the test plans in two weeks. In phone conferences held on May 12 and 14, 2008, the parties discussed details of the testing and USEPA agreed to memorialize the agreement by issuing revised information requests such that Veolia would only be required to perform emission testing for mercury, LVMs, and SVMs ("MACT metals"). Harris Aff. at VES 008386.

[5] The issue resolution proposal related to the allegations of the September 2006 FOV.

Pursuant to this agreement, USEPA issued a revised §114 information request on June 5, 2008 (the same day USEPA issued Veolia's draft Title V permit). *See* June 2008 Information Requests at VES 004721-004733. The June 2008 Information Requests required Veolia to, among other things: commence performance testing for LVMs, SVMs, and mercury by no later than August 15, 2008; submit the results of this testing in a Notification of Compliance ("NOC") by September 26, 2008; and submit an application for significant modification to its Title V permit (to include the OPLs for LVMs, SVMs, and mercury developed by the metals testing in the Title V permit) by September 26, 2008. (On or about June 11, 2008, USEPA and the Sierra Club settled the July 2006 lawsuit with a consent decree that required USEPA to issue a formal permit decision on Veolia's Title V permit by September 12, 2008—thus, Veolia knew that a Title V permit would be issued in September without OPLs for metals and that it would be required to submit an application for significant modification to add the OPLs for metals later.)

On June 12, 2008, USEPA issued a Finding of Violation to Veolia ("June 2008 FOV"). June 2008 FOV at VES 004734-004739. The FOV alleged that Veolia had exceeded its feedrate limits. The Agency also inaccurately alleged that Veolia had failed to request approval of the extrapolation method included in the 2003 CPT plan. The Agency asserted that Veolia had exceeded its feedrate limits because Veolia had operated pursuant to the extrapolated OPLs. However, the FOV did not provide any detail concerning when and how the OPL violations may have occurred or how Veolia had failed to garner the appropriate approval of its extrapolation methodology. Further, the June 2008 FOV did not require Veolia to take any corrective actions or to submit a written response.

A public hearing was held concerning the draft Title V permit on July 8, 2008. Several prominent public figures from across the Southern Illinois region attended the hearing and spoke in support of Veolia's facility. *See generally* June 2008 Public Hearing Transcript at VES 004740-004811.

Veolia was required to submit a performance test plan for USEPA approval prior to performing the metals testing memorialized in the June 2008 Information Requests. The February and June 2008 Information Requests specifically prohibited Veolia from requesting to use data-in-lieu; however, the requests did allow Veolia to request to use an extrapolation methodology to calculate the feedrates for LVMs, SVMs, and mercury. *See* February 2008 Information Requests at VES 002450-002457; June 2008 Information Requests at VES 002481.

Before including an extrapolation method in its metals test plan, Veolia discussed extrapolation methods with Mr. Charles Hall, a USEPA Region 5 environmental engineer. As a result of these discussions, Mr. Hall provided Veolia with an extrapolation protocol that USEPA had previously approved for use by Lubrizol Corporation (a corporation also regulated by Region 5) ("Lubrizol Extrapolation Methodology"). Harris Aff. at VES 008387. Veolia incorporated the approved Lubrizol Extrapolation Methodology into the metals test plan that Veolia submitted to USEPA in accordance with the June 2008 Information Requests. *See* Metals Performance Test Plans at VES 002487-002707.

USEPA approved the general parameters of the metals test plan in a letter sent to Veolia dated August 8, 2008. *See* USEPA's Aug. 8, 2008 Letter at VES 002709-002712. However, in response to Veolia's proposal to use the extrapolation method that USEPA Region 5 had previously approved for use by Lubrizol, the Agency stated that it neither "approved nor disapproved" of Veolia's metals feedrate extrapolation. *See id.* at VES 002712. USEPA agreed that, until such time as USEPA did approve metal extrapolation, Veolia could operate at a feedrate no greater than the feedrate used during the actual stack testing. Veolia continues to operate at a feedrate no greater than feedrates established during CPT testing.

Veolia proceeded to perform the stack testing for mercury, SVMs, and LVMs in August and September of 2008. USEPA Region 5 personnel were present at each test—except the final run[6] on unit 4, which was observed by IEPA personnel. The final results of the metals tests showed that all three incineration units were in full compliance with the MACT standards for mercury, SVMs, and LVMs.

On September 12, 2008, USEPA formally issued a Title V permit to Veolia (Permit No. V-IL-1716300103-08-01). Veolia's 2008 Title V permit at VES 007297-007507. Veolia's final Title V permit did not contain OPLs for mercury, SVMs, and LVMs.

On September 16, 2008, at Veolia's request, USEPA issued another revised §114 information request extending Veolia's deadline to submit the test data, NOC, and its application for significant modification to October 10, 2008. *See* September 2008 Information Requests at VES 002713-002726. The extension provided Veolia with additional time to add information collected during the September portion of the metals testing.

On October 8, 2008, the Sierra Club filed a stipulation dismissing with prejudice the lawsuit that it had filed against USEPA in July of 2006. The basis of the dismissal was that all requirements of the settlement agreement between the Sierra Club and the USEPA had been fulfilled—i.e., USEPA had issued a Title V permit to Veolia.

On October 10, 2008, pursuant to the February, June, and September 2008 Information Requests, Veolia submitted a NOC, the test reports for incinerators 2, 3, and 4, and an application for significant modification to Veolia's Title V permit. *See* Veolia's Oct. 10, 2008 Submission at VES 002727-003877.) In its application for significant modification, Veolia, as required by the Agency, submitted revised OPLs for mercury, SVMs, and LVMs. *See* September 2008 Information Requests at VES 002714-002726.

In addition, pursuant to the USEPA's February, June, and September 2008 revised Information Requests, Veolia also requested permission to use extrapolation methods to calculate feedrates for LVMs, SVMs, and mercury. *See* Feb. 2008 Information Requests at VES 002442-002459; June 2008 Information Requests at VES 004728; Sept. 2008 Information Requests VES 002721. As detailed in its application, Veolia used the Lubrizol Extrapolation Methodology supplied by USEPA Region 5 and lowered the extrapolated metal feedrates based on historical data as

[6] Each metals performance test conducted on one of Veolia's incineration units consisted of three runs.

defined in 40 C.F.R. § 63.1209(n)(2)(ii)(B)(2). *See* Veolia's Oct. 2008 Application for Significant Modification at VES 000743-000917.

On October 14, 2008, just four days after Veolia submitted the NOC, the test reports from the August and September metals testing, and its application for significant modification, Veolia placed in its operating record a new DOC ("2008 DOC") to establish its compliance with the final HWC MACT Rule.[7] Importantly, Veolia's 2008 DOC contained OPLs for LVMs, SVMs, and mercury that are not based on extrapolation methodology. *See* Veolia's 2008 DOC at VES 003879-004123. Veolia began operating under these OPLs on October 14, 2008, in full compliance with the HWC MACT standards.

Also on October 14, 2008, Veolia submitted a new CPT plan for units 2, 3, and 4. This plan set forth the testing protocols for PM, HCL/Cl2, and dioxins/furans as required by the HWC MACT Rule. Veolia was not required to include MACT metals in this CPT plan.

5. *2009 through 2010: Proposed CEMS and Special Waste Analysis Procedures*

After discussions with USEPA in late 2008, Veolia submitted a revised application for significant modification to USEPA on or about January 6, 2009. This revision lowered (i.e., made the OPLs more restrictive) the feedrates for LVM, SVM, and mercury based on a revised calculation for the moisture content of the solid waste that was fed to the incinerator during the August and September 2008 metals testing. Veolia included in the revised application the Lubrizol Extrapolation Methodology USEPA had provided to Veolia in 2008.

On February 3, 2009, Veolia received another USEPA §114 Information Request dated January 29, 2009 ("January 2009 Information Requests"). *See* January 2009 Information Requests at VES 004814-004824. The January 2009 Information Requests directed Veolia to install Continuous Emission Monitoring Systems ("CEMS") for mercury on the three hazardous waste incinerators located at the Sauget facility within 30 days of Veolia's receipt of the requests. The requests also required Veolia to install, evaluate, and certify the mercury CEMS in accordance with an inapplicable Performance Specification (Performance Specification 12) within 30 days after commencing operation of the CEMS. *See* January 2009 Information Requests at VES 004820. The requests also required Veolia to implement "Special Waste Analysis Procedures" that would significantly modify the facility's existing waste analysis protocols under its Waste Analysis Plan ("WAP") (required under RCRA) and Feedstream Analysis Plan ("FAP") (required under the CAA).[8] Among other things, the January 2009 Information Requests required Veolia to analyze all incoming waste for mercury, LVMs, and SVMs within 24 hours of receipt and required more extensive analysis of batches and blends of waste received at the facility. *See* January 2009 Information Requests at VES 004822.

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[7] Veolia was required to comply with the final HWC MACT on or before October 14, 2008. See 40 C.F.R. §§ 63.1200 – 63.1221.

[8] The Special Waste Procedures were Region 5's first attempt at what has now become the enhanced monitoring technique included in the 2014 Draft Permit currently at issue.

Upon reviewing the January 2009 Information Requests and determining that it would need additional time to fully evaluate the CEMS and the additional analysis requirements, Veolia sought a 60-day extension of time to respond. However, USEPA's assistant regional counsel Sabrina Argentieri denied Veolia's request with no further explanation. Veolia responded to USEPA within the required 30-day timeframe. Veolia's 35-page written response, dated March 4, 2009, ("March 2009 Response") set forth in great detail Veolia's MACT compliance history, Veolia's compliance with the Title V permit program, Veolia's compliance with the RCRA Part B permit program, and specifically responded to each numbered paragraph in Appendices B and C of the January 2009 Information Requests. *See* Veolia's March 2009 Response at VES 001880-001917.

Veolia's March 2009 Response also raised numerous legal, procedural, and technical concerns regarding the provisions of the January 2009 Information Requests. The vast majority of Veolia's concerns were substantive scientific and engineering questions regarding the reliability and accuracy of mercury CEMS. Harris Aff. at VES 008387-008388.

On May 13, 2009, Veolia representatives flew to Chicago to meet with USEPA personnel. The majority of the meeting addressed the technical issues surrounding the installation of mercury CEMS on Veolia's hazardous waste incinerators. USEPA conceded that 30 days had been an insufficient period of time to install the CEMS contemplated by the January 2009 Information Requests. Moreover, the Agency acknowledged that the National Institute of Standards and Technology ("NIST") had yet to come up with a traceable calibration standard that could verify the accuracy of data produced by the proposed mercury CEMS. USEPA also conceded that it had referenced the wrong Performance Specification—Draft PS12—in its information requests and that, to its knowledge, no mercury CEMS had yet been installed and successfully operated at a commercial hazardous waste combustion facility in the United States. Despite these errors and admissions, USEPA indicated that it was not going to withdraw the January 2009 Information Requests and that it intended to use the data collected by the CEMS for compliance with the HWC MACT and possible enforcement. However, the Agency did indicate that it wished to continue the dialogue with Veolia and ended the meeting by stating that Agency personnel would contact Veolia for further discussions—with the eventual goal being some sort of settlement regarding compliance. To date, USEPA has not provided a written response to Veolia's questions or concerns. Harris Aff. at VES 008387-008388.

On or about May 29, 2009, Veolia received another §114 Information Request from USEPA ("May 2009 Information Requests"). *See* May 2009 Information Requests at VES 004825-004832. The May 2009 Information Requests sought data on Veolia's 1-minute average mercury feedrates and 12-hour rolling average mercury feedrates, as well as extensive technical information related to the laboratory analysis Veolia performed on samples taken during the 2008 stack testing. Veolia submitted the required information in a response dated July 6, 2009, and supplemented its response by correspondence dated July 28, 2009. *See* Veolia's July 6, 2009 Response at VES 004833-004841 and Veolia's July 28, 2009 Response at 005547-005548. USEPA did not respond to Veolia's submissions. Harris Aff. at VES 008388.

On November 3, 2009, during a conference call with Veolia, USEPA requested that Veolia resubmit its application for significant modification of Veolia's Title V permit with even more restrictive OPLs for LVMs, SVMs, and mercury. In the discussions, USEPA and Veolia agreed

that Veolia could use the Lubrizol Extrapolation Methodology it had previously used (and that USEPA had provided in 2008), but that Veolia would limit the extrapolation to a maximum of a low multiple of the performance test feedrates or 75% of the MACT Emission Standard, whichever was less. Harris Aff. at VES 008387.

In December of 2009, Veolia conducted a CPT on units 2, 3, and 4 pursuant to the CPT Plan for PM, HCL/Cl2, and dioxins/furans that Veolia had submitted on October 14, 2008 and USEPA had approved on November 25, 2009. This testing did not include MACT metals.

On February 25, 2010, Veolia submitted its third revised application for significant modification of the Title V permit. This February 2010 significant modification application included OPLs based on a revised extrapolation methodology that was discussed during the November 3, 2009, conference call. However, consistent with USEPA's wishes, Veolia further limited the OPLs to a maximum of three times the amount of LVMs, SVMs, and mercury actually fed into the incinerator during the performance testing. (In light of Veolia's February 2010 revised application, USEPA later requested that Veolia withdraw the October 10, 2008, and January 6, 2009, applications for significant modification. Veolia obliged USEPA via correspondence dated May 12, 2010.) *See* Veolia's May 12, 2010 Letter at VES 000940-000941.

The Agency's next contact with Veolia was the delivery, without prior notification or explanation, of yet another information request under §114, dated March 10, 2010 ("March 2010 Information Requests"). March 2010 Information Requests at VES 006357-006368.

The March 2010 Information Requests consisted of a slightly revised version of USEPA's flawed January 2009 Information Requests with a few material changes to the relevant requests. In the March 2010 Information Requests, USEPA attempted to fix the deficiencies that plagued the January 2009 version by impermissibly shifting the burden to Veolia to create technical standards to verify the data generated by the mercury CEMS.

Veolia responded to the March 2010 Information Requests on March 25, 2010. *See* Veolia's March 25, 2010 Response at VES 006346-006468. In addition to numerous general objections, Veolia objected to the Information Requests on the grounds that (a) they were unconstitutional as they placed Veolia in a position of incurring penalties for noncompliance without any opportunity for administrative or judicial review; (b) they represented an attempt by the Agency to unlawfully modify Veolia's Title V permit; (c) they represented an attempt by the Agency to deprive Veolia of its due process rights by circumventing Veolia's appeal of its RCRA Part B Permit; and (d) they were arbitrary and capricious and lacked a rational basis because they ignored Veolia's demonstrated compliance with the HWC MACT Rule. However, despite these objections, Veolia again offered to meet with the Agency in an attempt to work out a compromise.

On April 28, 2010, Veolia sent a team of decision makers to meet with USEPA at USEPA's Raleigh, North Carolina Research Triangle Park facility. At these meetings, the Agency was unable to identify any location where mercury CEMS technology had ever been successfully utilized in the United States on a commercial hazardous waste incinerator. Veolia expressed its belief, based upon Veolia's experience in operating its commercial hazardous waste incinerators, that the high moisture, high temperature environment found in the incinerators and the wide

variations of mercury found in the feed combined to make the Veolia incinerators the most challenging environment in which anyone had ever proposed to operate a mercury CEMS. Veolia believed that the technology was likely to fail and would succeed, if ever, only after the mercury CEMS endured many failures and Veolia incurred much time and expense attempting to force the technology to successfully operate. The Agency did not disagree and offered no evidence to the contrary. As a result of the discussions, the Agency offered to entertain alternative methods to obtain the relevant emissions information. *See* Veolia's May 25, 2010 Letter at VES 006469-006471; Harris Aff. at VES 008388.

In response to USEPA's invitation to offer alternative methods as part of the ongoing discussions between the parties, on May 25, 2010, Veolia offered, in relevant part, to install additional technology in the form of activated carbon injection systems on incinerators 2 and 3, provided that all approvals were in place, to further reduce emissions. *See* Veolia's May 25, 2010 Letter at VES 006469-006471. (Activated carbon injection systems are an effective means of reducing the emissions of mercury and other materials from incinerators.) Veolia further proposed that it would provide the Agency with additional data by scheduling and performing mercury emission testing in accordance with the USEPA approved 2008 performance test plans. This testing would document whether incinerator units 2, 3 and 4 met all applicable mercury MACT Standards. Despite its offer to entertain alternatives to the March 2010 Information Requests, the Agency never provided an analysis or otherwise responded to the merits of Veolia's proposal. Harris Aff. at VES 008388.

Rather, on June 7, 2010, the Agency sent Veolia its sixth information request under §114 in 28 months ("June 2010 Information Requests"). June 2010 Information Requests at VES 007572-007579. The June 2010 Information Requests sought data on Veolia's 1-minute average for all metal feedrates, 12-hour rolling average for all metal feedrates, and extensive technical information related to analysis performed on samples conducted on all materials fed into Units 2, 3 and 4 from January 1, 2005 to the date of the June 2010 Information Requests. It also requested information on process upsets, malfunctions, or shutdowns for various timeframes. Veolia submitted the required information in responses dated June 23, 2010, July 7, 2010, July 15, 2010, and July 23, 2010. *See* Veolia's Response to June 2010 Information requests at VES 007508-7517. USEPA did not respond to Veolia's submissions. Harris Aff. at VES 008389.

6. *2011 through 2013: NEIC Inspection & No Progress on Significant Modification*

On December 5, 2011, Veolia was notified by the USEPA National Enforcement Investigation Center ("NEIC") that NEIC inspectors would be conducting a multimedia compliance inspection at Veolia's Sauget facility beginning the next day—on December 6, 2011. *See* NEIC's Dec. 5, 2011 Notice Letter, at VES 006472-006477. From December 6, 2011 until December 15, 2011, the NEIC conducted a multi-media compliance inspection at Veolia's facility. The NEIC inspectors were also accompanied by USEPA Region 5 personnel Shannon Downey, Sarah Marshall, and Jamie Paulin during portions of the visit. NEIC inspectors also requested additional information from Veolia throughout calendar year 2012.

On February 27, 2012, USEPA contacted Veolia to set up a conference call concerning Veolia's application for significant modification of Veolia's Title V permit. Despite the requirements of 40 C.F.R. § 71.7(a)(2), which requires the Agency to respond within 18 months, more than two years had passed since Veolia submitted its February 2010 application for significant modification. A conference call was held between Veolia and USEPA on March 8, 2012. During the call, USEPA informed Veolia that the Agency was going to deny Veolia's application for significant modification because of the extrapolation methodology that Veolia used—the Lubrizol Extrapolation Methodology that USEPA had provided to Veolia in 2008. Veolia and USEPA then discussed a schedule by which either Veolia would submit additional information, or the Agency would begin actions to formally deny the modification application.

Veolia responded to USEPA by email on March 27, 2012. In that correspondence, Veolia reiterated that it wanted to work with the Agency, but believed that the request by the USEPA to again revise the application—for the *fourth time*—was unreasonable, particularly in light of the fact that Veolia prepared the February 2010 submission in accordance with the agreement reached with USEPA during November of 2009.

Subsequently, at the Agency's request, Veolia submitted even more technical information to USEPA in June 2012, in support of the application for significant modification. *See* Veolia's June 2012 Submission at VES 008284-008287.

On August 27, 2012, Veolia received a Finding of Violation dated August 24, 2012 ("August 2012 FOV") from the Air and Radiation Branch of Region 5. August 2012 FOV at VES 001356-001365. The August 2012 FOV alleged violations based on the March 2010 Information Requests (which restated much of the January 2009 Information Requests) that related to failure to install mercury CEMS, Veolia's OPLs, and the NEIC inspection that had taken place in December of 2011. Portions of the FOV were based on the final inspection report issued by the NEIC; however, USEPA did not provide the report to Veolia.

On September 5, 2012, Veolia submitted its CPT plan to perform stack testing on all three incinerators per the HWC MACT Rule. This submission included planned testing for all hazardous air pollutants regulated under the HWC MACT, including metals (i.e., mercury, LVMs, and SVMs) to take place in August and September of 2013.

Pursuant to the direction of the August 2012 FOV, Veolia scheduled a meeting with USEPA to address the FOV's allegations. This meeting was scheduled for September 18, 2012, in USEPA's Chicago office. On September 17, 2012, the day before the scheduled meeting on the August 2012 FOV, USEPA Bureau of Land sent Veolia a Notice of Violation, dated September 13, 2012. September 2012 NOV at VES 006478-006481. The September 2012 NOV contained a subset of the same allegations contained with the August 2012 FOV. Harris Aff. at VES 008390.

Veolia representatives met with USEPA on September 18, 2012, in Chicago to discuss both the August 2012 FOV and the September 2012 NOV. During the meeting, Veolia informed USEPA that it could not properly respond to the violations alleged in the FOV and the NOV without receiving a copy of the NEIC Report, which, at the time of the meeting, Veolia had requested but had not received. In addition, based on the information set forth in the FOV and the NOV, Veolia stated that the NEIC Report appeared to contain errors. Region 5 Assistant Regional

Counsel Sabrina Argentieri requested that Veolia set forth in writing the allegations that Veolia believed to be erroneous, to the extent Veolia could do so without having the benefit of having reviewed the NEIC Report. Harris Aff. at VES 008390. On September 26, 2012, Veolia provided Ms. Argentieri with the requested written analysis. Veolia Sept. 26, 2012 Analysis at VES 006482.

In addition to discussing the FOV and the NOV, Veolia expressed concerns about installing multi-metals CEMS when none of its competitors was forced to do so. In response, Region 5's Nathan Frank, Chief of the Air Enforcement Section Branch, dismissed Veolia's concern by stating: Someone has to be first." Warchol Aff. at VES 008382.

Veolia finally received a copy of the NEIC report on September 28, 2012. The NEIC Report provided context—and further explanation—for USEPA's allegations. Veolia confirmed that the NEIC report contained errors. After having reviewed the NEIC Report, Veolia provided a written response to the allegations via letter dated October 12, 2012. *See* Veolia's Oct. 12, 2012 Response at VES 006483-006502.

Veolia next received an email from George Czerniak, Region 5's Chief of Air Enforcement & Compliance Assurance, on November 29, 2012, informing Veolia that USEPA was about to issue a notice of intent to deny Veolia's application for significant modification of the Title V permit. USEPA Nov. 29, 2012 email at VES 001679-001680. The email also stated that USEPA intended to formally reopen Veolia's Title V permit to include more stringent OPLs for mercury, supplemental FAP requirements (i.e., the special waste analysis procedure first proposed in the January 2009 Information Requests) and require the installation of multi-metals CEMS.

One of the attachments to USEPA's November 29, 2012, email was a "Fact Sheet" which contained numerous inaccurate and derogatory remarks concerning Veolia, including that the Veolia facility was "controversial" and needed "tougher" feedrates. USEPA Nov. Fact Sheet at VES 001844-001846. On November 30, 2013, Doug Harris contacted Genevieve DaMico of Region 5 USEPA and requested that the above statements be removed from the final Fact Sheet or corrected. Harris Aff. at VES 008390-008391. However, even though Ms. DaMico agreed to remove those comments, Region 5 nevertheless included the draft November Fact Sheet containing the derogatory statements as part of the administrative record available to the public during the subsequent permit reopening proceeding. Email attaching draft November Fact Sheet at VES 001679-001846, 001844-001846.

By letter dated December 13, 2012, Veolia responded to George Czerniak's November 29, 2012, email. Veolia Dec. 13, 2012 email at VES 001850-001853. Veolia explained that it was withdrawing its application for significant modification because the process had taken four years, had not achieved its objective of establishing OPLs for Veolia's existing Title V permit, and was no longer necessary because Veolia's application to renew the Title V permit will be due on April 12, 2013. In addition, Veolia informed USEPA that it would be performing stack testing on all three incinerators per the HWC MACT Rule (including testing for MACT metals) in August and September of 2013.

On December 19, 2012, David Ogulei of USEPA sent an email to Doug Harris providing Veolia with an "update" on USEPA's plans concerning Veolia's Title V permit. USEPA Dec. 19, 2012 email at VES 001857. The email stated that USEPA intended to reopen the permit to include feedrate limits derived from Veolia's 2008 metals testing and that USEPA intended to provide formal notice of the reopening in early 2013.

Finally, on or about January 10, 2013, Veolia received a copy of USEPA's "Notice of Proposed Modification of Veolia's Title V permit" ("Notice of Reopening"), a copy of the Agency's Statement of Basis for reopening Veolia's permit, a copy of the draft reopened Title V permit, and a copy of the USEPA fact sheet entitled "U.S. EPA Proposes to Reopen Title V Air Permit" ("Jan. 2013 Fact Sheet"). *See generally* VES 000002-000173. The 2013 Reopening Proposal contained four main changes from Veolia's 2008 Title V permit: 1) it required the installation and operation of multi-metals CEMS on Unit 3 for a 12 month period; 2) it included OPLs (feedrate limits) for mercury, LVMs, and SVMs; 3) it included supplemental feedstream analysis procedures for mercury, LVMs, and SVMs; and 4) it prohibited Veolia from accepting beryllium containing waste for incineration.[9] Further details concerning USEPA's attempt at reopening Veolia's 2008 Title V permit are provided in Section C of this Part.

B. Relevant Regulatory and Procedural History Concerning Veolia's RCRA Part B Permit

1. *1997 through 2003: Initial RCRA Part B Permit, Renewal, and Risk Assessment*

Veolia received its initial RCRA Part B permit on March 31, 1988. *See* 1988 RCRA Permit at VES 006711-006858. This initial permit expired on May 5, 1998. Consequently, on November 6, 1997, Veolia submitted an application to IEPA to renew its existing RCRA Part B permit. IEPA deemed Veolia's application administratively complete on April 17, 1998. Approximately five years later, IEPA finally issued a draft RCRA Part B permit for public comment. In 2003, USEPA conducted a RCRA risk screen[10] as part of its review of the draft Veolia permit. Upon completion of the risk screen, USEPA advised Veolia that Veolia's emissions did not pose any risks, and additional risk-assessment was not required. *See* VES 006940.

A public meeting regarding the Part B Permit was held on July 22, 2003. At that meeting, a public commenter suggested that mercury emissions from Veolia may pose a risk to the fisheries in area lakes that residents allegedly use as a food source.[11] After the public meeting, USEPA revised the risk screen. This revised version of the risk screening was developed in response to

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[9] Veolia only accepts non-NESHAP beryllium containing waste.

[10] The purposes of screening level risk assessments are to: 1) estimate the likelihood that a particular risk exists, 2) identify the need for site-specific data collection efforts, or 3) to focus site-specific risk assessments where warranted. *See* Office of Solid Waste & Emergency Response, USEPA, The Role of Screening-Level Risk Assessments (June 2001), attached at VES 006507-006514.

[11] This statement is included in the transcribed comments from the July 22, 2003 public meeting. *See* July 22, 2003 Public Meeting Transcript at VES 004472-004593.

the 2003 public meeting and, unlike the earlier risk screening which was conducted prior to the public meeting, this time USEPA identified increased risk.

Veolia submitted its comments on the draft permit on September 17, 2003. Veolia's 2003 Cmts. at VES 006859-006866.

2. *2005 through 2013: Veolia Risk Assessment, Permit Issuance & RCRA Permit Appeal*

In light of USEPA's contradictory risk screenings—the first identifying no risk and the second identifying some risk—Veolia contracted with Franklin Engineering Group (Franklin Engineering) in 2004 to perform a second, independent, risk assessment regarding metals emissions. Franklin Engineering utilized USEPA's Human Health Risk Assessment Protocol ("HHRAP") for Hazardous Waste Combustion Facilities[12] to determine that Veolia's low level of metals emissions did not pose a risk to the water bodies in Frank Holten State Park. VES 019310-019488. In November of 2005, Veolia submitted the results of this risk assessment to USEPA. USEPA indicated to Veolia that it would review and comment on the results of the risk assessment conducted by Franklin Engineering within four to six weeks; however, USEPA never responded to Veolia's submission. Harris Aff. at VES 008385.

Rather, USEPA performed yet another risk screening in May 2007. May 2007 Risk Screen at VES 007616-007713. The May 2007 risk screening concluded no additional limits were necessary for dioxins, cadmium, lead, chromium, beryllium and arsenic. *Id.* at VES 007640. The screening found only emissions of mercury from the Veolia facility at the HWC MACT emissions standard would result in potential exposure to methyl mercury above USEPA's risk management guidelines. Therefore, the screening recommended that total annual stack emissions of mercury from the Veolia facility be limited to protect human health.

With regard to finding increased risk due to potential methyl mercury exposure, however, the Agency only reached this conclusion by ignoring evidence and making many assumptions, including that subsistence fishing is conducted at lakes in Frank Holten State Park (a state park and golf course located approximately three miles to the East of the Sauget Facility); that the lakes are closed systems when, in fact, they are connected to the Mississippi River through various canals and ditches which allow fish to travel between the lakes and the River; that fish are native to the lakes when many of the fish most likely to be consumed are stocked; and that the trophic level for the fish is 4 which is too conservative and inconsistent with existing evidence. *See generally* VES 006940; DWO at VES 007606-008087. In November 2007, USEPA provided an addendum to the May 2007 Risk Screening which explained how USEPA calculated the conversion of expected emissions of inorganic mercury from the Veolia incinerator stacks to methyl mercury for purposes of assessing potential human health risks, but failed to change any of the unsupported assumptions or the resulting inaccurate conclusions contained in the May 2007 Risk Screening. *See* USEPA Addendum at VES 007714-007760.

[12] Franklin Engineering utilized the 1998 Peer Review Draft version of the HHRAP (EPA530-D-98-001) during the initial stages of the risk assessment and then finalized its evaluation using the Final HHRAP (EPA520-R-05-006), which USEPA published in September of 2005.

On July 24, 2008, over ten years after Veolia submitted its original application for renewal of its RCRA Part B Permit, IEPA issued a second draft permit for public comment ("2008 Draft RCRA Permit"). The 2008 Draft RCRA permit contained many modifications from the draft issued by IEPA in 2003, including stringent requirements regarding mercury. The permit established a "Mercury Annual Feed Rate Limit" for Veolia that stated "[t]he Permittee shall not feed more than a total of 3.63 kilograms (kg) of mercury per year to any combination of the three incineration units." *See* 2008 Draft RCRA Permit at VES 006549. The permit also included requirements that Veolia analyze all incoming waste for mercury within 24 hours of receipt and required more extensive mercury analysis of batches and blends of waste received at the facility. *Id.* at VES 006549-006553. (These later requirements are nearly identical to the ones included in the January 2009 Information Requests, the 2013 Reopening Proposal, and the 2014 Draft Title V permit.)

Veolia submitted its comments on the 2008 Draft RCRA Permit on September 12, 2008. Veolia Sept. 2008 Cmts. at VES 006867-006893. Veolia stated that the new requirements for mercury analysis, recordkeeping and feedrates were "overly onerous, appear punitive, have no regulatory or safety basis and are not consistent with the requirements of the other Region 5 hazardous waste incinerator permits." *See Id.* at VES 006867-006893. Specifically, Veolia noted that the mercury feedrate limit of 3.63 kg/year failed to take into account any removal efficiencies and ignored the results of the risk assessment performed by Franklin Engineering in 2005. Veolia also commented that sampling all waste coming into the facility for mercury within 24 hours was impractical and potentially unsafe. Veolia also added that the increased batch and blend sampling was unnecessary because, if implemented, it would require Veolia to analyze certain wastes a minimum of three times before they could be incinerated.

The 2008 Draft RCRA Permit also set forth a method for calculating the concentration of mercury that Veolia must use in determining its feedrate. Under the method—if Veolia analyzed a waste and could not detect mercury (because the concentration was lower than the instrument could measure)—then Veolia was required to assume that the waste contained mercury at a concentration of ½ of the reporting limit.[13] In other words, Veolia would be required to assume that all of its incoming waste contained some mercury (in this case up to ½ of the reporting limit of the chosen mercury analyzer). Veolia explained in its comments that if it were required to assume ½ the reporting limit every time it was required to perform an analysis of waste, then it would nearly exceed the annual feedrate limit for mercury without ever having actually detected mercury in a single sample during the entire year of incinerator operations. Veolia further related that this requirement would artificially inflate the amount of mercury that it was handling at the facility. Veolia's Sept. 2008 Cmts. at VES 006880-006882. (Note: In the 2014 Draft Permit, if the applicable metal is not detected at or above the reporting limit for the metal, the metal concentration shall be equal to the reporting limit.)

[13] The term "reporting limit" generally means the lowest concentration at which an analyte can be accurately detected in a sample. However, for purposes of Veolia's comments, "reporting limit" and "detection limit" will be used interchangeably.

On December 2, 2009, 12 years after Veolia submitted its application for renewal of its RCRA Part B Permit, IEPA issued a final RCRA Part B permit to Veolia ("2009 Final RCRA permit"). *See* 2009 Final RCRA Permit at VES 006711-006858. The final permit contained essentially the same requirements as the 2008 Draft RCRA Permit; specifically, it included all of the stringent mercury analysis requirements that Veolia had commented on in September of 2008.

On January 5, 2010, Veolia appealed the 2009 Final RCRA Permit in its entirety by filing a petition for review with the Illinois Pollution Control Board. Veolia RCRA Appeal at VES 006697-006706. Veolia's appeal is still pending before the Board.

In an effort to settle the RCRA permit appeal, on August 5, 2011, Veolia submitted a "Sampling and Analysis Plan" to IEPA and USEPA proposing a fish and water study of lakes located in Frank Holten State Park that were the focus of the 2003 Risk Screen (and Veolia's follow-up Risk Assessment in 2005). The Sampling and Analysis Plan proposed to collect a sufficient amount of actual quality data regarding the water and fish in the lakes in order to determine the efficacy of the risk studies. Veolia made this proposal in order to provide an analysis based on actual data as opposed to the assumed data USEPA used in its May 2007 Risk Screen. By letter dated September 19, 2011, IEPA provided comments on the Sampling and Analysis Plan. *See* IEPA's Letter at VES 007168-007174. IEPA's September 19th Letter questioned how some of the data would be used to reevaluate the risk assessments but did agree that the sampling could be used to evaluate (and determine) a key assumption of both studies—the assumed trophic level of certain fish (i.e., their position in the food chain) and the resulting bioaccumulation factor ("BAF") assigned to those fish. (BAF is a measure that indicates uptake and retention of certain compounds by organisms.)

In addition, IEPA also responded to Veolia's submissions regarding settlement of the various challenged permit conditions via letter dated September 22, 2011. IEPA indicated that the permit could be changed to clarify some of the disputed requirements, including but not limited to the requirement that all waste must be sampled within 24 hours of receipt for the presence of mercury since "Veolia must never rush to sample a waste where it would cause a safety issue." IEPA's Sept. 22, 2011 Letter at VES 007175-007177, 007176.

On October 4, 2011, Veolia met with personnel from IEPA, the Illinois Attorney General's Office, and USEPA in Springfield, Illinois, to discuss IEPA's comments on the Sampling and Analysis Plan. Although the meeting was set up to discuss IEPA's comments, it was clear to Veolia that USEPA had provided the majority of the comments and analysis of the Plan. Moreover, USEPA personnel led the technical discussion of the meeting concerning the risk studies and their role in supporting the Agency's actions under the HWC MACT Rule. At the conclusion of the meeting, USEPA also, for the first time, verbally shared with Veolia the federal Agency's calculated mercury removal efficiencies for the three incineration units. This information allowed Veolia to calculate the numerical OPLs (feedrates) for mercury that the Agency believed Veolia should be operating under. (Recall that Veolia had repeatedly requested that USEPA share their calculations and OPLs with Veolia during the Title V permitting process in 2008.) Harris Aff. at VES 008389.

Subsequently, Region 5 continued its pursuit of multi-metals CEMS and enhanced waste analysis under their CAA enforcement and permitting authority. Thus, as this federal permitting process has continued, the IEPA, the Illinois Attorney General's Office and Veolia have more or less been required to maintain a holding pattern with regard to the RCRA permit and the appeal. As addressed immediately below, USEPA's efforts to reopen Veolia's Title V Permit in 2013 consolidated the disputed RCRA issues in the Title V process.

C. USEPA's Attempt to Reopen Veolia's Title V Permit in 2013 and the Convergence of All Disputed Issues in the Current Permit Action

As related above, Veolia has been continually hamstrung in its permitting efforts. In the early years IEPA simply delayed making permitting decisions. Following the series of Sierra Club lawsuits, USEPA was determined to demonstrate activity while simultaneously avoiding taking final agency action. Adding insult to injury, both the IEPA and USEPA delayed and ultimately mishandled the issuance of Veolia's RCRA permit. These tortured, years-long processes finally culminated in the reopening that USEPA undertook in January of 2013.

On January 8, 2013, USEPA proposed to reopen Veolia's Title V permit to include revised OPLs, installation of multi-metals CEMS, and enhanced FAP requirements. The permit reopening effort essentially combined all of the contentious issues concerning Veolia's CAA compliance and RCRA permit into a single administrative process. USEPA took this action even though Veolia's then current Title V permit was set to expire only nine months later—on October 12, 2013—and Veolia's permit renewal application was due only three months later—on April 12, 2013. Despite USEPA's illogical timing of attempting to reopen a five-year permit with nine months of the permit remaining, Veolia spent considerable time and resources preparing a lengthy set of comments to the new permit requirements. Region 5 conducted a public hearing with virtually no one from the community attending. On March 29, 2013, Veolia submitted its comments, which pointed out the numerous technical flaws, inaccuracies, and misrepresentations in Region 5's proposal. Veolia's 2013 comments at VES 008972-009070.

Subsequently, the Agency took no action whatsoever on the proposed reopening. Veolia did not hear from USEPA and therefore proceeded with its obligations under Title V and the HWC MACT.

On April 8, 2013, Veolia submitted its application for renewal of its Title V operating permit. The Agency deemed Veolia's application to be "administratively complete" via letter dated September 11, 2013. USEPA Sept. 11, 2013 Approval Letter at VES 010012-010013.

Approximately four months *before* USEPA had proposed to "reopen" Veolia's Title V permit, Veolia was required to submit its test plans for its next round of CPTs to be performed pursuant to the MACT standard. On September 5, 2012, Veolia had submitted its CPT test plans. Via letter dated September 27, 2013, USEPA finally approved Veolia's test plans and Veolia commenced the CPTs in September of 2013. VES 019294-019295.

During October in 2013, Veolia conducted a complete set of CPTs on incineration units 2, 3, and 4. USEPA and IEPA representatives attended the tests and observed the preparation of the spiked waste to be fed into the incinerators and the procedures used to pull accurate samples

from Veolia's stack emissions. Veolia completed its CPTs in October of 2013 and the test results showed that all three units performed well and met all emissions standards. Under the HWC MACT rule, Veolia had to submit final test reports concerning the CPTs to USEPA by January 28, 2014.

However before Veolia could submit its reports, on December 12, 2013, Veolia received a §114 request from Region 5 seeking a significant amount of raw data concerning Veolia's metal feed rates for a 3 year period. See Dec. 2013 Info. Requests at VES 019297-019306. Despite having to work through the holidays to compile the information—and taking time away from finishing the CPT reports—Veolia responded within the very short (14 day) deadline requested by the Agency. By letter dated December 26, 2013, Veolia sent its response to Region 5's latest 114 request. Veolia's Response to Dec. 2013 Info. Requests at VES 019271-019282.

Also during December of 2013, Veolia was contacted by representatives of the U.S. Department of Justice ("DOJ"). DOJ informed counsel for Veolia that it wished to enter into a tolling agreement with Veolia to toll the statutes of limitations on two of the previous FOVs issued to Veolia dated August 24, 2012 and September 13, 2012.[14] Veolia executed a tolling agreement with DOJ concerning the two FOVs on January 3, 2014. The agreement tolled the statute of limitations periods for the FOVs until April 30, 2014 and was later extended to September 30, 2014. (Subsequently, the DOJ contacted Veolia after the period had expired and communicated that they would not be pursuing any claims against Veolia based on the FOVs. *See* Voicemail from DOJ at VES 016105.)

On January 28, 2014, Veolia submitted its CPT reports showing that all three incinerators passed all test parameters and were in full compliance with the HWC MACT standards. *See* VES 012326-012453.

On March 13, 2014, over a year after Region 5 proposed to reopen Veolia's Title V permit, Veolia finally learned that Region 5 had abandoned the reopening in favor of pursuing the same conditions in Veolia's permit renewal process. Region 5 did not convey this information to Veolia directly. Rather, Veolia learned that the reopening was, in effect, "dead" when the Agency emailed a listserv aimed at developing a plan for public participation in Veolia's permit renewal process. *See* Region 5 March 13, 2014 email at VES 010889.

Veolia next heard from Region 5 concerning its Title V permit on September 16, 2014, when the Agency sent Veolia a preliminary version of the new draft Title V. *See* VES 010159-010410. Region 5 agreed to meet with Veolia by September 30, 2014. *See id.* Veolia met with Region 5 representatives on September 30, 2014 in Chicago. VES 019296. At the meeting, Veolia voiced its concerns regarding the requirements included in the preliminary draft to install not one, but three, multimetals CEMS at the facility. However, despite disagreement over the CEMS's related-issues, both sides believed some middle ground could be had on other issues and left the meeting with a commitment to continue discussions.

[14] The September 13, 2012 FOV was actually a "Notice of Violation"; however, it contained nearly identical allegations to the August 24, 2012 FOV.

On October 9, 2014, Veolia engaged in telephone discussions with Region 5 regarding working towards an agreement on the conditions of the permit. Region 5 agreed to continue discussing the issue internally and represented to Veolia that it would contact Veolia prior to actually issuing the draft permit for public comment pursuant to 40 C.F.R. § 71.11(a)(5). Five days later, USEPA contacted Veolia and stated that the Agency would be issuing the draft permit as-written, without further discussions towards an agreement. The same day, October, 14, 2014, Region 5 issued the draft Title V permit for public comment.

As Veolia predicted in its comments submitted in March of 2013, Region 5's reopening process turned out to be a colossal waste of time and resources for both Veolia and the government. That fact was totally lost on Region 5 as evidenced by their justification for abandoning the reopening (which was included in the Statement of Basis for the 2014 Draft Permit):

> Due to the complexity of the comments received, EPA did not finalize the proposed modifications prior to the expiration of the 2008 permit. At the same time, Veolia informed EPA that it was planning to conduct another round of CPTs in October 2013. Because of that fact and because Veolia's 2008 permit was due for renewal, EPA decided that, rather than finalizing the proposed reopening, it would be most effective to include the OPLs and additional monitoring requirements in the renewal permit that is the subject of this permitting action.

Statement of Basis at 27.[15] For Veolia, saying "I told you so" is a pyrrhic victory because Region 5 still forced Veolia to spend hundreds of thousands of dollars on responding to a permit action that went nowhere and accomplished nothing. This result would be surprising if it hadn't happened to Veolia so many times before during the permitting history outlined above.

IV. Veolia's Comments

A. Region 5 Has Exceeded its Authority to "Assure Compliance" Under the Clean Air Act by Requiring Veolia to Implement Supplemental Feedstream Analysis Procedures and Install Multi-Metals CEMS

Region 5 has arbitrarily and capriciously exceeded its authority to "assure compliance" under the CAA by imposing unnecessary permit conditions on Veolia that require the implementation of supplemental FAP procedures and the installation of multi-metals CEMS. Section 504 of the CAA sets forth the authority for the inclusion of monitoring requirements in Title V permits. *See* 42 U.S.C. §§ 7661c(a), (c). Specifically, Section 504, subsections (a) and (c), state:

[15] Region 5 inaccurately portrays its failure to finalize the proposed reopening. Veolia's permit expired on October 12, 2013, however USEPA notified Veolia in June of 2012 that the CPT was required to be initiated by September 5, 2013. Although Veolia disagreed with this date because the five year requirement for CPT testing would have put the testing due by September 5, 2014, Veolia submitted CPT plans to USEPA on September 5, 2012. This is well before the permit expired on October 12, 2013. Thus, Region 5's claim that it abandoned the reopening because is learned of Veolia's plans to perform CPT testing is completely false.

(a) *Conditions*
Each permit issued under this subchapter shall include enforceable emission limitations and standards, a schedule of compliance, a requirement that the permittee submit to the permitting authority, no less often than every 6 months, the results of any required monitoring, and such other conditions as are **necessary to assure compliance with applicable requirements of this chapter**, including the requirements of the applicable implementation plan.

....

(c) *Inspection, entry, monitoring, certification, and reporting*
Each permit issued under this subchapter shall set forth inspection, entry, monitoring, compliance certification, and reporting requirements to **assure compliance with the permit terms and conditions**. Such monitoring and reporting requirements shall conform to any applicable regulation under subsection (b) of this section.

Id. By using the phrase "assure compliance" in these two subsections, Congress provided the Agency with authority to: 1) impose permit conditions that ensure that an emissions source complies with the CAA; and 2) impose monitoring requirements that ensure that an emissions source abides by the permit conditions established by the Agency. However, the express text of Section 504 also provides ***limits*** to these two areas of authority for USEPA.

Under Subsection (a), Congress chose to qualify the phrase "assure compliance" with the adjective "necessary." *See* § 7661c(a). The adjective "necessary" means something that "cannot be dispensed with; essential; indispensable; as, water is necessary to life." WEBSTER'S NEW UNIVERSAL UNABRIDGED DICTIONARY 1200 (2d ed. 1983). Thus, Subsection (a) limits USEPA to requiring only those permit conditions that are essential to ensuring that a source maintains compliance with the Clean Air Act.

The monitoring text included in the Section 504 and the Part 71 Rules has given rise to three principle situations where the Agency includes monitoring schemes into Title V permits.

1. Under 40 C.F.R. § 71.6(a)(3)(i)(A), the Agency must ensure that the monitoring requirements provided by the substantive emissions rules make it into the Title V permit—e.g., Region 5 must ensure that the monitoring provisions of the HWC MACT, OPLs, certain CEMS, FAP, etc., are placed in Veolia's Title V permit.

2. Under 40 C.F.R. § 71.6(a)(3)(i)(B), if the substantive emission rule does not contain any periodic testing or monitoring requirements, then the Agency has an obligation to add monitoring or testing requirements sufficient to assure compliance.

3. If the substantive emissions rule contains *some* periodic testing and monitoring, but the Agency determines that the periodic testing and monitoring provided by the underlying substantive rule is inadequate, the Agency may add monitoring or testing requirements sufficient to assure compliance. *See* 40 C.F.R. § 71.6(c)(1).

The third scenario has been the subject of much litigation as it allows the Agency the most discretion and provides the opportunity for the most abuse. As noted by Region 5 in the Statement of Basis, the D.C. Circuit supported state and local Title V permitting authorities' ability to supplement inadequate monitoring requirements in *Sierra Club v. EPA*, 536 F.3d 673 (D.C. Cir. 2008). While *Sierra Club* did interpret 40 C.F.R. § 70.6(c)(1) as providing permitting authorities with the power to supplement monitoring requirements, it only did so in the context of a finding that the underlying testing and monitoring requirements were "inadequate." *Sierra Club*, 536 F.3d at 680. The *Sierra Club* Court, however, was silent on what is "inadequate" and the case did not discuss or even mention this issue.

What constitutes an "inadequate" monitoring requirement is not entirely clear and is a "context-specific determination"—a point driven home by the Environmental Appeals Board case cited by Region 5 in the Statement of Basis. *See In re CITGO Refining & Chemicals Co.*, No. VI-2007-01, 2009 WL 7513859, 5 (EAB May 28, 2009). However, what is clear is that the monitoring requirements provided by the MACT rules and under USEPA's Compliance Assurance Monitoring ("CAM") rule are "sufficient to assure compliance with permit terms and conditions, thus meeting the requirements of 40 C.F.R. § 70.6(c)(1)." *Id.* In fact, USEPA has long recognized that MACT Standards promulgated pursuant to Section 112, including the HWC MACT, contain sufficient monitoring provisions to assure continuous compliance. The Preamble to the CAM rule, for instance, states:

> With respect to emissions units subject to new hazardous air pollutant standards under amended section 112 of the Act, EPA will include appropriate monitoring requirements as part of those new hazardous air pollutant standards. . . . This approach is consistent with EPA's statement in the July 21, 1992 preamble to 40 CFR part 70 that all future rulemakings will have no gap in their monitoring provisions (see 57 FR 32278).

62 Fed. Reg. 54,900, 54918 (Oct. 22, 1997). USEPA has also acknowledged that the HWC MACT includes "improved monitoring requirements." 71 Fed. Reg. 75422, 75426 (Dec. 15, 2006); *see also* HWC MACT Fact Sheet re Title V Operating Permits http://www.epa.gov/epawaste/hazard/tsd/td/combust/toolkit/titlevfs.pdf.

Here, Region 5 proposes to: 1) add onerous supplemental feedstream analysis procedures, and 2) require the installation of a multi-metals CEMs. Region 5 states that these modifications are "necessary" to assure Veolia's compliance with Title V and the HWC MACT because the monitoring provided by the HWC MACT is insufficient. *See* Statement of Basis at 47 & 54. However, these proposals are NOT necessary to assuring Veolia's compliance with either Title V or the HWC MACT and the periodic monitoring requirements of HWC MACT are not inadequate or insufficient such that Region 5 may impose these proposals.

1. *Veolia's Existing Feedstream Analysis Procedures Are Sufficient and Region 5 Has Exceeded Its Authority by Arbitrarily and Capriciously Determining Otherwise*

The conditions in Veolia's current FAP are identical in every respect to the provisions of 40 C.F.R. § 63.1209(c) of the HWC MACT. However, Region 5's supplemental feedstream analysis procedures that are included in the 2014 Draft Permit go far beyond what is set forth in the HWC MACT. In doing so, the Agency has also gone far beyond its authority to assure compliance as set forth in Title V. As set forth above, Section 504 of Title V creates a two-tier scheme that provides USEPA the power to 1) impose permit conditions that ensure compliance with the CAA and 2) impose monitoring provisions that ensure that a source complies with the permit conditions. Through the promulgation of the HWC MACT, USEPA has already expressly established what feedstream analysis procedures are required to assure compliance with the CAA.

Specifically, in Section 63.1209(c)(1) USEPA instructs that "prior to feeding the material, you must obtain an analysis of each feedstream that is sufficient to document compliance with the applicable feedrate limits provided by this section." 40 C.F.R. § 63.1209(c)(1). Then, in Subsection 63.1209(c)(2) through subsection (4), USEPA sets forth the requirements that must followed to ensure that the requirements of (1) are met. *Id.* §§ 63.1209(c)(2)-(4). Thus, in drafting Section 63.1209(c), USEPA already expressly determined how Veolia and every other incinerator must analyze feedstreams in order to document compliance with the "applicable feedrate limits" that are developed under the HWC MACT rule. These provisions appear verbatim in Veolia's FAP and Veolia has complied with these requirements in full. As Region 5 itself has concluded, "Veolia's FAP literally has all of the elements that 40 C.F.R. Section 63.1209(c)(2)(i) through (vi) require." *See* Charles Hall Memo. at VES 0001293. USEPA's supplemental requirements are therefore not essential or necessary to ensure compliance with the CAA—the essential terms are already set forth in the HWC MACT and included in Veolia's current FAP.

Thus, Region 5 must remove the supplemental FAP requirements from the 2014 Draft Permit.

2. *The Monitoring Requirements of the HWC MACT Are Sufficient*

The essential testing and monitoring requirements of the HWC MACT are CPTs (which not only indicate a source's compliance with emission limits, but also are used to create the limits in the first place), OPLs, and a source's FAP. USEPA chose to include these methods in the HWC MACT because they are proven measures and produce reliable and timely information. The rule also relies on certain types of continuous emissions monitoring systems ("CEMS"). As the acronym implies, CEMS, when calibrated correctly, provide real-time sampling and analysis of a facility's emissions. The HWC MACT requires that sources use certain types of CEMS to monitor emissions. Specifically, hazardous waste incinerators are required to use either a carbon monoxide or hydrocarbon CEMS and an oxygen CEMS. *See* 40 C.F.R. § 63.1209(a). Further, the rule requires an incinerator to install, calibrate, maintain, and continuously operate all CEMS in compliance with the exact technical requirements called "performance specifications" set forth in the appendix to 40 C.F.R. Part 63, Subpart EEE. In addition to the aforementioned CEMS, the HWC MACT also provides that incinerators (and other HWCs) must install, calibrate, maintain

and operate a particulate matter ("PM") CEMS to measure fine particle emissions. *See* 40 C.F.R. § 63.1209(a)(1)(iii). However, for PM CEMS, the rule makes a notable exception:

> [C]ompliance with the requirements in this section to install, calibrate, maintain and operate the PM CEMS **is not required** until such time that the Agency promulgates all performance specifications and operational requirements applicable to PM CEMS.

Id. (emphasis supplied). To date, EPA has yet to fulfill these requirements, hence Veolia and other incinerators are not required to install PM CEMS under the rule. Thus, pursuant to the express language of the HWC MACT, Veolia operates CEMS to measure, among other constituents, oxygen and carbon monoxide in its emissions.

The 2014 Draft Permit issued to Veolia, however, requires Veolia to install, calibrate, maintain and operate a multi-metals CEMS. 2014 Draft Permit at 34. This condition was imposed notwithstanding the fact that the HWC MACT does not require, or even mention, multi-metals CEMS as an acceptable form of monitoring.

USEPA drafted the HWC MACT carefully to ensure that sources implemented only CEMS that were technically ready to produce accurate results. This is evidenced by the delayed implementation scheme regarding PM CEMS that was written-into the text of the regulations at Section 63.1209(a)(1)(iii). USEPA recognized that sources could not rely on PM CEMS to produce reliable data until the Agency had vetted the monitors, drafted performance specifications, and promulgated operational requirements. Moreover, USEPA has proceeded with caution concerning a number of other CEMS that have been discussed as candidates for compliance purposes under the HWC MACT rule, including mercury CEMS, hydrochloric acid CEMS, chlorine gas CEMS, and multimetals CEMS. *See* 64 Fed. Reg. at 52,930. In each instance the Agency stopped short of promulgating requirements for these CEMS because the monitors either did not function correctly in the field or could not meet performance specifications that USEPA drafted. *See id.* However, the Agency did decide to provide sources with the ability to petition the Agency to use a specific CEMS for these HAPs under 40 C.F.R. § 63.1209(a)(5). Using this provision, a source such as Veolia could petition USEPA to use a CEMS in lieu of complying with OPLs for a given standard. Thus, if a source were so inclined, it has the ability and incentive to make a CEMS work in exchange for the elimination of OPLs for whatever HAP the CEMS monitors.

USEPA's decisions as set forth in the text of the HWC MACT regarding the implementation of CEMS are logical and based on when technology is ready and available. More importantly, the HWC MACT also provides emissions sources with the power and the incentive to push CEMS monitoring and forgo compliance with OPLs when the technology is feasible and available. In contrast to the measured approach of the HWC MACT, Region 5 has arbitrarily and capriciously imposed an experimental multimetals CEMS on Veolia by administrative fiat. Not only is a multimetals CEMS not required by the HWC MACT, Region 5's insistence on pushing this unproven technology on Veolia is counter to how such monitoring technology has been handled under the HWC MACT since the rule's creation.

As evidenced by the thorough and careful approach noted above, the HWC MACT's monitoring requirements are not inadequate or insufficient; however, Region 5's rationale for forcing an unproven multi-metals CEMS on Veolia is inadequate and unreasonable.

3. *40 C.F.R. § 63.1209(g)(2) Does Not Authorize Region 5's Decision to Force Veolia to Install Multi-Metals CEMS*

Region 5 cites 40 C.F.R. § 63.1209(g)(2) as one of its principle means of legal authority in support of requiring Veolia to install a multi-metals CEMS. However, 40 C.F.R. § 63.1209(g)(2) only addresses operating parameters, not CEMS as used in Veolia's Title V. Further, the "alternative approaches to establish limits on operating parameters" language does not support the argument that the CEMS establishes limits on operating parameters, since no limits are established by the CEMS. While Veolia may need to explain the cause of a deviation and any actions it may voluntarily choose to take in response, Veolia is required to comply with the FAP as set forth in its draft Title V permit during the period that the CEMS is operating. The CEMS does not establish alternative limits in the FAP nor does it have any present effect on any of the other operating parameters set forth in Veolia's Title V permit. A relationship between the parameter to be measured via parametric monitoring and the surrogate being measured must be established before USEPA can apply parametric monitoring to a source. In this instance, there is no such relationship. In fact, Region 5 is improperly using the multi-metals CEMS to establish such a relationship.

The inapplicability of § 63.1209(g) to the CEMS requirement contained within the 2014 Draft Permit is borne out in the first part of § 63.1209(g) which restricts this section to "[a]lternative monitoring requirements other than continuous emissions monitoring systems (CEMS)."

Section 63.1209(g) is clearly intended to allow the Administrator to impose additional non-CEMS operating requirements on the facility if it is determined that they are needed. There is no mention of CEMs in this paragraph. This paragraph specifically mentions "additional or alternative operating parameters" and "alternative approaches to establish limits on operating parameters." Further, § 63.1209(g)(2) allows the Administrator to impose additional operating parameters (even gives the example of opacity for PM), but does not give the Administrator the authority to require a facility to install and operate a multi-metal CEMs.[16]

If the regulatory language is not sufficient to make this point, one only needs to look at the Federal Register preamble to the Final HWC MACT rule, the Federal Register preamble to the proposed HWC MACT rule, the Technical Support Document, and the Response to Comment Document– none of which provide authority for requiring CEMS.

In HWC MACT proposed rule, 69 Fed. Reg. 21,198 (April 20, 2004), Section 63.1209(g)(2) is mentioned 3 times all on the same page:

[16] This determination is also required to be on a case-by-case basis and cannot be based on a policy to require all HWCs to install CEMS (which can only be done through a properly noticed rulemaking).

> Finally, we note that, in the interim until we determine whether to promulgate a maximum pH limit to control mercury emissions, site-specific or other information may lead the delegated regulatory authority to conclude under **§63.1209(g)(2)** that a limit on the maximum pH of wet scrubber liquid may be warranted to ensure compliance with the mercury emission standard.
> ....
>
> The current regulations require you to establish site-specific operating parameter limits to ensure performance of electrostatic precipitators, ionizing wet scrubbers, and fabric filters. *See* § 63.1209(m)(1)(iv).282 Regulatory officials review and approve those operating parameter limits and may require additional or alternative limits under **§ 63.1209(g)(2)**.
>
> [Footnote 282.] Please note that § 63.1209(m)(1)(iv) inadvertently indicates that the requirement to establish site-specific operating limits applies to control devices other than ionizing wet scrubbers, baghouses, and electrostatic precipitators. We should have revised that paragraph to require site-specific operating parameter limits for those control devices when we revised paragraph (m)(1) to delete the operating parameter limits for those devices. The delegated regulatory authority can use **§ 63.1209(g)(2)** to require you to establish site-specific operating parameter limits for those control devices prior to the effective date of the final rule based on today's proposed rule.

69 Fed. Reg. at 21,346 (emphasis added). The only mention of § 63.1209(g)(2) in the final HWC MACT rule, 70 Fed. Reg. 59,402 (Oct. 12, 2005), is as follows.

> Finally, all sources—those with either wet or dry gas—should precondition the sampling train for one hour prior to beginning the test to satisfy the filter's affinity for hydrogen chloride. The permitting authority will ensure that sources precondition the sample train (under authority of **§ 63.1209(g)(2)**) when they review and approve the performance test plan.

70 Fed. Reg. at 59,429 (emphasis added). USEPA mentions the use of § 63.1209(g)(2) four times in the Technical Support Document for the 2005 rule (Volume 4, page numbers at the end of each quote).

> Nevertheless, a 10-minute averaging period, or perhaps instantaneous limits, may be more appropriate for some parameters at some sites. The Agency, under **§63.1209(g)(2)**, can specify additional or alternative requirements (including shorter averaging periods) on a case-by case basis if they are necessary to better assure compliance with the emission standards. (2-14)
> ....
>
> Liquid injection nozzle pressure -- In some scrubbers designed for PM control, nozzles are used and relied upon to atomize the scrubbing liquid. For these systems, a limit on minimum nozzle pressure may be required to ensure adequate

> liquid atomization, as determined by permitting officials on a site-specific basis under the provisions of **§63.1209(g)(2)**. It is recommended that compliance be based on a 1-hour rolling average time period, and that the limit be set based on manufacturer or equipment designer specifications. (4-14)
> ....
>
> However, there is concern that carbon monoxide or hydrocarbon monitoring may not be adequate to ensure that good combustion practice will be maintained and that emissions standards will be met for all batch feed operations. Because oxygen depletion can occur very rapidly due to batch overcharging, when CO or HC begin to approach the standard it may be too late to apply corrective action. To address this concern, regulatory officials can impose additional operating parameter limits that may affect batch feeding operations for a specific site either using discretionary authority provided by **§63.1209(g)(2)** or through an enforcement action. (8-3)
> ....
>
> After the MACT compliance date, permitting officials will likely become aware of inefficient or unstable batch feeding operations, since a source is required to submit a report to the Agency if it exceeds any of its operating parameter limits (such as the CO or HC standard) more than 10 times in a 60 day period. It is anticipated that permitting officials will take the opportunity to review batch feed operations and, if it is determined that batch feed operations do contribute to the frequency of exceedances, will use the authority under **§63.1209(g)(2)** to establish batch feed operating parameter limits. (8-4)

Finally, there is only one mention of the use of **§63.1209(g)(2)** in the Response to Comment Documents (Volume 3, page 249-250):

> At the same time, we are not prohibiting the selection of a maximum pH limit on scrubber liquor, if made by the permit writer on a site-specific basis, under Section **63.1209(g)(2)**, and determined from factors such as: (1) proximity of projected emissions to the MACT standard; (2) relative degree of wet scrubber mercury control achieved and feedrate of mercury; (3) previous compliance history; and (4) scrubber design and operational practices.

All of the references in the regulations, preambles, technical support document, and response to comments document are interpreting § 63.1209(g)(2) to require additional or modified operating parameters. There is no mention of using this section to require installing or operating a CEMS. Thus, § 63.1209(g)(2) fails to provide Region 5 the authority to require a facility to install and operate a multi-metals CEMs.

The fact is, the HWC MACT allows Veolia, not the Region 5, to petition whether to use a CEMS in lieu of complying with the corresponding OPLs. *See* 40 C.F.R. § 63.1209(a)(5). This arrangement, contained in one part of § 63.1209, belies any suggestion that another part of

§63.1209, including § 63.1209(g)(2), allows Region 5 to require Veolia to install a multi-metals CEMS.[17]

4. *Section 114 of the CAA Does Not Authorize Region 5's Permitting Decision*

Section 114(a)(1) of the CAA is a general provision relating to the authority of the USEPA to request information necessary for developing plans and standards, "determining whether any person is in violation of any such standard or any requirement of such a plan," and "carrying out any provision of this chapter." 42 U.S.C. § 7414(a)(1). Region 5 admits that requiring Veolia to install a multi-metals CEMS is not for the purposes stated in Section 114(a) but is instead necessary "to assess whether the identified parameters and operating parameter levels are adequate to assure compliance with emissions limits set forth in the HWC MACT." Statement of Basis at 53. In other words, the stated purpose of the multi-metals CEMS is not to determine whether Veolia is in violation of the HWC MACT emissions limits, but to assess whether the established OPLs are sufficient. Region 5 does not explain why requiring Veolia to install a multi-metals CEMS is necessary for the purpose of "carrying out" any provision of the CAA or even cite to a provision of the Act being carried out.

The permit provision of the CAA, § 504(a), also does not require Veolia to install a multi-metals CEMS. *See* 42 U.S.C. § 7661c(a). As stated above, the HWC MACT sets the conditions, including the OPLs, that are "necessary" to assure compliance with the applicable emissions limits. In fact, 42 U.S.C. § 7661c(b) explicitly states that "continuous emissions monitoring need not be required if alternative methods are available that provide sufficiently reliable and timely information for determining compliance."

Importantly, USEPA has previously rejected requiring CEMS in order to "assure compliance" pursuant to § 114(a) and § 504(a) of the CAA. On October 22, 1997, USEPA issued the Compliance Assurance Monitoring (or "CAM") rule establishing enhanced monitoring and compliance certification requirements for certain major stationary sources at 40 C.F.R. Part 64. 62 Fed. Reg. 54,900 (Oct. 22, 1997). As USEPA explained in the Federal Register Preamble to the CAM rule:

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[17] EPA Region 5's focus on CEMS may be a result of a misunderstanding of the methodology that USEPA has established for determining compliance with emissions limits. The Statement of Basis at 63 cites pages 2–5 and Figure 1 of AP-42 for the "hierarchy" that Veolia must follow when calculating emissions. See AP 42 at http://www.epa.gov/ttn/chief/ap42/c00s00.pdf. The Statement of Basis misquotes the information in the document by holding CEMS results to be superior to results of an applicable performance test. Since the emissions limits are based on levels achievable and demonstrable pursuant to the relevant performance test, setting CEMS results superior to performance test results is inappropriate. See Portland Cement Association v. Ruckelshaus, 486 F.2d 375, 396 (D.C. Cir. 1973), cert. denied, 417 U.S. 921 (1974) ("a significant difference between techniques used by the agency in arriving at standards, and requirements presently prescribed for determining compliance with standards, raises serious questions about the validity of the standard."). In addition, the Statement of Basis sets up a situation where Veolia must use CEMS data if available to determine whether it is complying with the relevant emissions levels, but allows "EPA, the public, or other regulatory agencies" to use "credible evidence" under the Credible Evidence Rule of 62 Fed. Reg. 8314 (Feb. 24, 1997) to challenge Veolia's compliance with the HWC MACT. Not only is this not fair, it is inconsistent with the explicit language of the Credible Evidence Rule.

> There are two basic approaches to assuring that control measures taken by the owner or operator to achieve compliance are properly operated and maintained so that the owner or operator continues to achieve compliance with applicable requirements. One method is to establish monitoring as a method for directly determining continuous compliance with applicable requirements. The Agency has adopted this approach in some rulemakings and, as discussed below, is committed to following this approach whenever appropriate in future rulemakings. Another approach is to establish monitoring for the purpose of: (1) Documenting continued operation of the control measures within ranges of specified indicators of performance (such as emissions, control device parameters and process parameters) that are designed to provide a reasonable assurance of compliance with applicable requirements; (2) indicating any excursions from these ranges; and (3) responding to the data so that excursions are corrected. The Part 64 published today adopts this second approach as an appropriate approach to enhancing monitoring in the context of Title V permitting for significant emission units that use control devices to achieve compliance with emission limits.

62 Fed. Reg. at 54,902. In adopting the CAM rule, USEPA expressly rejected the earlier proposed but never finalized Enhanced Monitoring Rule, 58 Fed. Reg. 54,648 (Oct. 22, 1993), which had a perceived bias of requiring CEMS as the only appropriate method for assuring continuous compliance. *See* 62 Fed. Reg. at 54923 ("Section 64.3(d) . . . clarifies that the rule does not mandate the use of CEMS in situations where such monitoring is not already required.")

Thus, neither § 114 or §504 provides Region 5 with authority to impose multi-metals CEMS on Veolia.

5. *The Multi-Metals CEMS As Imposed on Veolia Is Not a Parametric Monitor*

Region 5 includes the following in the Statement of Basis:

> Therefore, 40 C.F.R. § 63.1209(g)(2) and 42 U.S.C. § 7414(a) provide the authority to require installation and temporary use of a multi-metals Continuous Parameter Monitoring System (CPMS) to assess whether the identified parameters and operating parameter levels are adequate to assure compliance with the emission limits set forth in the HWC MACT. Under these authorities, a CPMS using CEMS technology can be used to indicate performance and not necessarily as a direct measure of emissions. EPA has previously employed this approach in the context of the Portland Cement MACT rulemaking in which EPA required affected sources to install PM CEMS but to operate each PM CEMS as a CPMS ... Therefore, throughout this document and Veolia's permit, EPA is using the term multi-metals CEMS to reflect the use of the CEMS as a CPMS.

Statement of Basis at 54. Parametric monitoring is premised on the idea of measuring or collecting data on one variable for the purposes of determining a value associated with a second variable. This is the "parametric relationship." To have meaning, there must be an established correlation between the variables. In the emissions monitoring context, a CEMS is sometimes used to measure a "surrogate" pollutant for the pollutant of concern. For example, a Carbon Monoxide ("CO") CEMS is sometimes used to determine whether a source is complying with its Volatile Organic Compound ("VOC") limit. The CO CEMS measures CO concentrations which change with the amount of VOCs being emitted. *See* USEPA, Technology Transfer Network, Continuous Monitoring Systems *at* http://cfpub.epa.gov/oarweb/mkb/Basic_Information.cfm. By correlating the amount of CO with the VOC emissions, the source can determine whether it is complying with its limit without actually measuring VOCs directly.

The Portland Cement MACT ("PC MACT") uses a PM CEMS in much the same way. USEPA decided that PM CEMS could not be included in the PC MACT because the CEMS could not meet the requirements of Performance Specification 11. *See* 78 Fed. Reg. 10,006, 10,019 (Feb. 12, 2013). However, the Agency still required sources to use PM CEMS to measure relative increases and decreases in PM concentration. In other words, the rule does not require the CEMS to measure the actual output of PM, but does utilize the PM CEMS to determine if a source is putting out more or less PM at any given time. *See id.* ("This relationship is notably coarser in terms of understanding the precise PM concentration in the stack, but the instrument's sensitivity to changing PM concentration in the stack ... does not deteriorate and may still be employed to *qualitatively* monitor PM emissions.") (emphasis added).

The PC MACT scheme, therefore, is totally different than Region 5's proposal that Veolia use a multi-metals CEMS to arrive at discrete numerical readings to determine whether the OPLs for mercury, LVMs, and SVMs are valid. The PC MACT works off of the traditional premise of parametric monitoring—a known correlation between variables. In Veolia's instance, there is no known correlation. However, even if the PC MACT did support Region 5's position regarding the use of a multi-metals CEMS by Veolia, which Veolia disputes, Region 5 misses a crucial distinction between the PC MACT process and the Veolia permit process: the requirement to use a CEMS as CPMS under the PC MACT was promulgated pursuant to a MACT rulemaking process under Section 112 of the CAA, not as part of a permit decision regarding a particular facility. Region 5 cannot simply call the multi-metals CEMS something it is not (a CPMS) in order to legalize its implementation. Moreover, because Region 5 lacks any legal authority for its decision to impose supplemental FAP requirements and a multi-metals CEMS on Veolia, those conditions must be deleted from the 2014 Draft Permit.

B. Region 5 is Arbitrarily and Capriciously Requiring the Use of an Unproven Technology (i.e., a multi-metals CEMS) to Verify a Proven and Required Means of Compliance (i.e., the OPLS and FAP) and the Agency Has Improperly Modified the Process for Alternative Monitoring

The regulations recognize OPLs and a feedstream analysis plan ("FAP") as the primary means to verify compliance with the HWC MACT. In the proposed permit, USEPA requires the use of a unproven technology (i.e. a multi-metals CEMS) to verify a required means of compliance (the OPLS and FAP).

All commercial hazardous waste incinerators in Region 5, including Veolia, demonstrate compliance with HWC MACT through FAPs, OPLs, and stack testing. None of the commercial hazardous waste incinerators in Region 5 have multi-metals CEMS. Roberson Aff. at VES 008292. USEPA acknowledged that no commercial hazardous waste incinerators have installed CEMS to measure HAP metals by stating "[s]omeone has to be first" when Veolia questioned the feasibility of applying the CEMS technology to a hazardous waste incinerator and the competitive impact such technology would have on Veolia if Veolia was the only entity in the industry forced to install such experimental technology. Warchol Aff. at VES 008382.

Under the HWC MACT rule, hazardous waste incinerators such as Veolia must conduct comprehensive performance tests (40 C.F.R. § 63.1207(b)) to establish OPLs, must characterize the feedstream prior to feeding the material into the incinerator and document the amount of mercury, semi-volatile metals (lead and cadmium) and low-volatile metals (arsenic, beryllium, chromium) in each feedstream (40 C.F.R. § 63.1209(c)). Pursuant to the HWC MACT, Veolia is given the choice either to document compliance with the OPLs or petition USEPA to install and operate a CEMS to directly measure emissions. Veolia has chosen to document compliance with the OPLs. Section 63.1209(c) requires that a subject facility must have a FAP "that is sufficient to document compliance with the applicable feed rate limits." The plan must be submitted to USEPA on request. Veolia has documented its compliance consistent with the regulations. In fact, as USEPA stated in its June 18, 2012 memorandum, "Veolia's FAP literally has all of the elements that 40 C.F.R. §63.1209(c)(2)(i) through (vi) require." Charles Hall July 18 Memo at VES 001291-001294; VES 001293; Statement of Basis at 47.

The HWC MACT rule does not mandate the use of CEMS to document compliance with the HWC MACT limits for mercury, low volatile metals, semi volatile metals or chlorine. In the past, USEPA has alleged that the reason CEMS were not required in past permits was, in part, due to EPA's determination that performance specifications for mercury or multi-metals CEMS were not yet available when USEPA finalized the HWC MACT rule. *See* VES 000159. To date, nothing has changed—USEPA still has not promulgated performance specifications or ongoing quality assurance or quality control procedures for multi-metals CEMS. In place of promulgated, tested, and valid performance specifications, Region 5 is now attempting to substantiate the multi-metals CEMS with Other Test Method ("OTM") 16 and OTM 20. Statement of Basis 61. This approach and these methods are flawed in several respects.

With regard to this approach, Region 5 states—without support or any citation whatsoever—that "EPA's historical practice indicates, OTM specifications and procedures can be used for compliance purposes with the approval of the permitting authority." Statement of Basis 62. Region 5's vague and unsupported reference to "historical practice" shows the arbitrary and capricious nature of the Agency decisionmaking in this instance. Moreover, Region 5's approach is in direct conflict with the "historical practice" that the Agency displayed when promulgating the HWC MACT rule. Specifically, with regard to the implementation of PM CEMS in the HWC MACT, the Agency promulgated a requirement for PM CEMS but also delayed implementation of the requirement "until such time that the Agency ***promulgates*** all performance specifications and operational requirements applicable to PM CEMS." 40 C.F.R. § 63.1209(a)(1)(iii) (emphasis supplied). Promulgation of standards is a form of notice and comment rulemaking where impacted parties and the general public can weigh in with comments

that bolster, challenge, and otherwise test the standards that Region 5 is seeking to implement. Making vague references to "historical practice" and posting OTMs on a website are a far cry from this process. *See* Statement of Basis at 61. Thus, contrary to the measured way that PM CEMS have been ushered into the HWC MACT scheme, the Agency is trying to arbitrarily and capriciously force multi-metals CEMS on Veolia without properly vetted, tested, and promulgated performance specifications and operational parameters.

As discussed elsewhere in more detail in these comments, the OTM specifications are also dramatically flawed and biased. They were developed by the sole marketer of the multi-metals CEMS technology at a facility—the former Eli Lilly incinerator—and under conditions that do not compare to the conditions encountered at commercial hazardous waste incinerators. Further, even if the OTM specifications were valid or applicable to the Veolia units, Region 5 has not provided sufficient operational parameters for Veolia to fully implement the multi-metals CEMS. Veolia must still grapple with sample-train issues (i.e., how to connect the multi-metals CEMS to Veolia's units to ensure a representative sample arrives at the monitor) and what quality assurance/quality control and calibration measures to use. Region 5 states that it is allowed to "impose continuous monitoring requirements under the Title V without a promulgated performance specification, provided that we include appropriate QA and QC procedures within the permit." Statement of Basis 62. Region 5 does not have that authority, but even if it did, it has failed its own test by not including appropriate QA and QC measures in the permit. In short, it is impossible to determine whether the multi-metals CEMS operates correctly. Roberson Aff. at VES 008290-008302.

Nevertheless, Region 5 justifies its attempt to force Veolia to install a multi-metals CEMS by stating:

> [T]he record for EPA's proposed action on Veolia's Title V permit renewal application supports the conclusion that the monitoring already performed by Veolia does not provide sufficient data for EPA to determine that the metal feedrate OPLs proposed by Veolia are stringent enough to assure compliance with the HWC MACT metals emissions limits regardless of the mix of wastes being incinerated or the combustion conditions, given the heterogeneity of the waste that Veolia incinerates and EPA's observations on Veolia's operation practices. Multi-metals CEMS would provide the data that EPA needs to verify the stringency of the metal feedrate OPLs proposed by Veolia.

Statement of Basis at 57. However, Region 5's Statement of Basis falls short of establishing that multi-metals CEMS will provide accurate data. Further, Region 5 refuses to allow Veolia to utilize the multi-metals CEMS technology in lieu of its emission monitoring requirements. Rather the draft permit instructs Veolia:

> During the 12-month period, Veolia will continue to monitor feedrates using the procedures in its FAP and the additional feedstream analysis procedures proposed in the Title V permit. In addition, during the 12-month period during which it operates the multi-metal CEMS, Veolia will be required to comply with the feedrate limits for mercury, LVM and SVM.

Statement of Basis at 55. Region 5's actions are inconsistent with the regulations and its logic is flawed. Region 5 is requiring a method (multi-metals CEMS technology) not approved in the regulations (absent a petition and additional proof provided by Veolia) to verify a method (OPLs and the FAP) approved by the regulations to demonstrate compliance. Region 5's analysis makes OPLs and the FAP irrelevant and unnecessary.

The only reasonable explanation for Region 5's demand that Veolia use both a multi-metal CEMS **and** OPLs/FAP is that Region 5 lacks sufficient knowledge about, or confidence in, the multi-metals CEMS to allow its use for compliance purposes (notwithstanding the representations made in the Statement of Basis). As already discussed, Region 5's lack of knowledge of the technology is reflected in Region 5's unprecedented reliance on the financially interested Pall and Cooper to explain the technology and respond to Veolia's objections. *See* VES 001368-001371. Further, Region 5's lack of confidence would explain, at least in part, why USEPA has never required any commercial hazardous waste incinerator to install a multi-metals CEMS to address an issue that Region 5 alleges exists at all incinerators—whether the FAP and OPLs are sufficient to assure continuous compliance with the HWC MACT.

Veolia is the only commercial hazardous waste incinerator in the country that has a USEPA region as its permitting authority. Region 5 is using this unique opportunity to attempt to address what it (wrongly) believes are problems with the way the HWC MACT requires sources to show compliance—i.e., CPTs and the creation of OPLs and a FAP. Region 5 is not evaluating Veolia's renewed permit so much as it is using Veolia (at Veolia's expense) to exploit what it sees as issues with the HWC MACT Rule. This is unlawful, unfair, and arbitrary and capricious as applied to Veolia. Region 5 is also acting in an arbitrary and capricious manner by selecting Veolia to pay for an experimental CEMS to benefit Region 5 so that the Agency can obtain more information about the technology and determine whether multi-metals CEMS technology can operate and accurately provide multi-metals analysis when used in commercial hazardous waste incinerators. This is likewise unfair as applied to Veolia. Region 5 cannot unlawfully make Veolia it's "guinea pig" with regard to the multi-metals CEMS just because it has the opportunity to do so.

Region 5's lack of faith in the CEMS and the Agency's unfairness when dealing with Veolia is further exposed by Region 5's inexplicable actions with regard to a recent Consent Decree entered into between Region 5 and Ross Incineration Services, Inc. ("Ross"). The Consent Decree arose out of USEPA's allegations that Ross violated several provisions of the HWC MACT, including exceeding their OPLs for mercury. *See* United States of America vs. Ross Incineration Servs., Inc, Case No. 1:12-cv-01441-DAP, U.S. Dist. Court N.D. Ohio (June 7, 2012) at VES 016712-016776. In its complaint, the United States alleges that on multiple occasions since August 4, 2006, Ross violated its Maximum Total Mercury Feedrate OPL. Compl. at ¶¶ 94-99 at VES 016727-016728.

Despite this allegation, which accuses Ross of actually feeding more mercury than its permit allowed, Region 5 entered into a Consent Decree with Ross on October 24, 2014, that makes not even the slightest reference to a multi-metals CEMS or any other form of CEMS. The Consent Decree catalogs a significant amount of operational and capital improvements that Ross must make, including certain monitoring upgrades, but inexplicably does not require Ross to implement a CEMS for MACT metals compliance. If USEPA truly believes that a multi-metals CEMS can produce accurate results in a commercial incineration environment, then they either

overlooked the opportunity to employ the technology at Ross or they are not being honest about their motives with regard to Veolia.

Finally, under 40 C.F.R. § 63.7(f), if a facility petitions to use a CEMS as an alternative test method, the petitioner must prove that the CEMS technology will work in the application. However, in this case, Region 5 is arbitrarily and capriciously mandating that Veolia utilize a multi-metals CEMS with no proof that it will work. If Veolia had petitioned the Agency to use the technology and offered no proof that it would work, the Agency would have summarily and correctly rejected the request.

Moreover, Region 5 is effectively acting as the petitioner vouching for the effective operation and accuracy of the new and untested multi-metals CEMS technology as an alternative test method under 40 C.F.R. § 63.7(f). However, USEPA does not have the authority to impose this alternative test method on Veolia. Rather, the regulation provides that:

> The owner or operator of an affected source required to do performance testing by a relevant standard may use an alternative test method from that specified in the standard.

40 C.F.R. § 63.7(f)(2) (emphasis added). USEPA is not an "owner or operator" that can request an alternative method under the regulation. Section 63.7(f) does not allow USEPA to unilaterally require Veolia to use an alternative test method such as the multi-metals CEMS, but even if it did, that requirement would be impermissible because the multi-metals CEMS has not been validated as an acceptable source of data.

Region 5 is required to accurately set forth the legal and factual bases for permit conditions, however, it failed to do so in the Statement of Basis. Veolia should not be made to bear the risk of failure of the multi-metals CEMS technology when Veolia has demonstrated and will continue to demonstrate compliance with the HWC MACT by the prescribed methods—OPLs, FAP and CPT testing. Veolia has not petitioned to use the multi-metals CEMS technology as an alternative to traditional methods of demonstrating compliance. The monitoring firms that stand to gain financially from the sale of the multi-metals CEMS should incur the expense necessary to demonstrate to USEPA and industry that CEMS technology is robust and accurate. Similarly, USEPA should independently review the technology and implement it through rulemaking if it is a technology that USEPA wishes to mandate the hazardous waste incineration industry to use.

The CEMS requirement should be removed from the 2014 Draft Permit.

C. Region 5 Failed to Analyze or Consider the Efficacy of Multi-Metals CEMS and Demonstrated Bias as Evidenced by its Collusion with Cooper

Despite being made aware of the potential for bias by Veolia, the administrative record shows that Region 5 has abandoned its role of independently evaluating the multi-metals CEMS technology in the 2014 Draft Permit.

At the time that Region 5 attempted to reopen Veolia's Title V permit in 2013, Veolia submitted evidence that demonstrated Region 5 failed to independently consider whether a multi-metals CEMS could be implemented at Veolia. Rather, the Agency simply accepted the representations

of Pall Corporation ("Pall"), a company who was at that time the sole marketer of the multi-metals CEMS technology and clearly had a financial interest in selling the technology. Veolia commented at length about the danger of bias when such a company communicates with USEPA about whether the technology would work in any given commercial hazardous waste incinerator environment. As the permitting authority, Region 5 should independently study and evaluate whether the technology can successfully operate in the environment and not simply accept the word of a company with a financial interest in selling the technology. Unfortunately, Region 5 has once again in the draft Title V allowed bias in favor of the technology to occur by relying upon the unsubstantiated statements of Cooper Environmental Services LLC ("Cooper"), the developer and current manufacturer of the multi-metals CEMS technology who has a financial interest in selling the technology.

CEMS technology was discussed at length between the parties when Veolia met with Region 5 on September 18, 2012 in Chicago to discuss, among other issues, the August 2012 FOV. As part of these discussions, Region 5 stated that it wanted Veolia to install a CEMS to monitor Veolia's metals emissions. Veolia stated that Veolia already demonstrated compliance with emissions standards using the methods set forth in the HWC MACT—through Veolia's OPLs, FAP, and CPTs. These methods were approved by the Agency in Veolia's Title V permit and are the same methods used by every other commercial hazardous waste incinerator in Region 5. Further, Veolia told USEPA that multi-metals CEMS technology could not operate effectively in Veolia's incinerators due to high temperatures and high variable moisture content—up to 40%—in Veolia's stacks. Warchol Aff. at VES 008382.

Region 5 responded by alleging, as set forth in its Statement of Basis at 60, that the Eli Lilly facility in Indiana successfully utilized the technology in the form of an Xact multi-metals CEMS. Veolia replied that the incinerator at the former Eli Lilly location, which is now owned and operated by Evonik, was not a commercial hazardous waste incinerator since it only accepted a homogenous feedstream. Evonik Aff. at VES 007596 Further, Evonik removed the CEMS from service permanently in August, 2011 due to problems with the sampling train and software and firmware problems. Sarah Marshall October 4, 2012 email at VES 001470. Evonik found the CEMS was costly in terms of time and maintenance and never relied on it for official monitoring purposes under the site's Title V permit. Evonik Aff. at VES 007596-007597. Veolia further explained that no commercial hazardous waste incinerator in the United States used multi-metals CEMS to monitor stack emissions and the technology simply could not successfully operate in the harsh conditions produced by Veolia's incinerators. Warchol Aff. at VES 008382.

However, USEPA never evaluated Veolia's concerns. Rather, at that time, USEPA turned over the evaluation of multi-metals CEMS to commercial vendors with specific financial interests in the technology—Pall and Cooper. Cooper developed the Xact multi-metals CEMS technology and Pall was the primary marketer of the Xact. At the time USEPA turned to Pall and Cooper, those companies stood to gain if USEPA required Veolia to install and operate a multi-metals CEMS. Cooper allowed Pall to take the lead in the discussions with the Agency. Pall has since abandoned the technology.

On September 19, 2012, the day after Veolia's meeting with USEPA and prior to Pall abandoning the technology, Warchol Aff. at VES 008383, Douglas Barth, Pall's Business

Development Manager, wrote Jeff Ryan at USEPA—apparently in response to an earlier communication that USEPA failed to make a part of the administrative record—the following email:

> It looks like this effort will take some time and tact. I will be happy to guide you and R5 [Region 5] through the maze of information to build a scientifically defensible case for our XRF CEMS and on HWI [Hazardous Waste Incinerator].
>
> XRF looks like the education starting point for this effort. Hg CEMS are AF and Multi-Metals are XRF, those Hg CEMS references set no precedence here that section of the slate is clean.
>
> As for Eli Lilly Co. Rick Lambert is the correct contact. Rick funded the research starting in 1996 with Army to R&D the first EPA certified MM CEMS. He owned and operated the system for 6 years. I will forward his contact information to you.
>
> I will save the rest of my responses for our talk.

D. Barth Sept. 19, 2012 email at VES 001371.[18] As the quoted correspondence makes clear, USEPA abdicated its regulatory responsibility to independently evaluate the science and technology issues raised by Veolia and presented by the multi-metals CEMS. The Agency deferred to Pall—a party with which the Agency had no contractual relationship and a party with a vested interest in having the Agency require Veolia to install multi-metals CEMS—to guide the Agency "through the maze of information to build a scientifically defensible case" for USEPA to require Pall's CEMS be installed at Veolia as part of the reopening process. Barth and Pall knew Pall could benefit financially for performing what would otherwise be USEPA's regulatory function if Pall supported USEPA's decision to require Veolia to purchase Pall's CEMS, regardless of whether it actually worked. Pall had no incentive to scrutinize whether the CEMS would produce reliable data when applied to Veolia's incinerators.

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[18] While the Agency included emails in the administrative record for the 2013 attempt to reopen Veolia's title V permit that demonstrate the Agency abdicated its role to evaluate the multi-metals CEMS technology, USEPA has inexplicably failed to include many of these same emails in the administrative record for the 2014 Draft Permit. Veolia therefore has included these documents in the current administrative record. Further, Veolia requests that USEPA disclose and add to the administrative record all communications pertaining to the Xact CEMS and identify and describe all financial or employment interests any USEPA or other governmental employees may have at any time in the Xact CEMS or any company that is associated with the Xact CEMS. Additionally, the emails between USEPA and Pall show evidence of attachments that may or may not have been delivered and may not have been made a part of the administrative record. *See* VES 001373-001378. To the extent USEPA has such attachments or other documents from Pall or Cooper, USEPA should make such information part of the administrative record in this matter. If USEPA fails to do so, Veolia believes such failure, without further explanation, demonstrates a strong showing of bad faith and improper behavior. Veolia reserves the right to further investigate the evidentiary basis for USEPA's decision in front of an appropriate tribunal through written discovery and, if necessary, evidence depositions. *See Sierra Club v. Costle*, 657 F.2d 298 (D.C. Cir. 1981). Further, if USEPA supplements the record, Veolia requests the public comment period be reopened following such additions.

Jeff Ryan, on behalf of USEPA, demonstrated the extent of USEPA's failure to adequately and independently analyze or consider the efficacy of multi-metals CEMS technology in Veolia's incinerators when he wrote to Barth on September 2012 and requested that Pall answer the two difficult questions Veolia raised at the September 18, 2012 meeting:

> Short story is I want to confirm/refute status of system at Lily and need to know whether you can operated @40% moisture. These are their [Veolia's] 2 majors points as why not. The Hg is a totally separate issue, and one we are well prepared for.

J. Ryan Sept. 20, 2012 email at VES 001370. Interestingly, USEPA's email reflects a level of comfort (perhaps equally misguided) with a mercury CEMS ("one we are well prepared for") that it apparently lacks with regard to the multi-metals CEMS. This makes USEPA's abandonment of its role to independently analyze the multi-metals technology—a technology that USEPA apparently is not well prepared for but nevertheless demands Veolia install—all that more appalling.

Pall replied to Ryan's inquiry the same day by stating:

> Yes, we can operate in 40% moisture.

D. Barth Sept. 20, 2012 email at VES 001370.

On the basis of Pall's reply, the Statement of Basis for the 2013 reopening of the permit provided:

> Eli Lilly's stack gases at the Tippecanoe facility averaged approximately 8 percent moisture content and 140 degree F° while the multi-metals CEMS was being operated. However, Pall Corporation has assured EPA that trial tests on its CEMS demonstrate that the unit can operate reliably at moisture contents above 40 percent.

2013 Statement of Basis at 24 (VES 000162). However, Pall has never inspected Veolia's incinerators. Warchol Aff. at VES 008382.

In the Statement of Basis for the 2014 Draft Permit, USEPA has once again repeated this mantra albeit attributing the assurance to Cooper:

> Eli Lilly's stack gases at the Tippecanoe facility averaged approximately 8 percent moisture content and 140 degree F° while the multi-metals CEMS was being operated. However, Cooper Environmental Services has assured EPA that trial tests on its CEMS demonstrate that the unit can operate reliably at moisture contents above 40 percent.

2014 Statement of Basis at 60 n.58.

The *only* information contained within the administrative record of the draft Title V that supports USEPA's statement that the CEMS can operate in Veolia's 40% moisture environment are a June 26, 2013 email from Cooper (VES 016100) in which Cooper states without further support, "[l]et me emphasize that it should be clear from this material previously sent that the Xact multi-

metals CEMS has demonstrated its applicability under a wide range of conditions including the conditions expected at the Sauget Veolia HWI; i.e. both wet and dry conditions and temperatures exceeding 350F" and a July 17, 2013 email from Krag Petterson at Cooper (VES 015660-015663), which states in relevant part "[t]he Xact has been tested in facilities with stack temperatures ranging from 100 to 450 degrees Fahrenheit and ranging in moisture content up to 20%." However, the administrative record does not contain the results of any demonstrations or tests where the Xact CEMS has successfully operated in these conditions.

On September 26, 2012, Pall sent an email providing additional information to Jeff Ryan regarding multi-metals CEMS that shows both Pall's lack of objectivity and the Agency's abdication of its regulatory role:

> Jeff,
>
> Per your request for building a case why the Xact 640 Multi-Metals CEMS cannot be rejected from monitoring a HWI.

D. Barth Sept. 26, 2012 email at VES 001368.

During the pendency of the comment period on the proposed reopening, Pall—the entity that USEPA relied upon for the technical information concerning the multi-metals CEMS set forth in the Statement of Basis for the 2013 permit reopening—abandoned the multi-metals CEMS technology, stopped offering the Xact CEMS for sale, and abandoned the multi-metals CEMS business. Warchol Aff. at VES 008383.

After Pall abandoned the technology it once championed, USEPA, rather than internally reviewing the technology, next turned to Cooper to obtain answers to fundamental technical questions that Veolia raised pertaining to the Xact CEMS. On May 21, 2013, USEPA's Measurement Technology Group reached out to Cooper and requested Cooper respond to a number of Veolia's comments in the proposed permit reopening including that it was misleading for USEPA to state in its Statement of Basis on the reopening that "[m]ulti-metals CEMS are commercially available and have been demonstrated to be reliable for measuring mercury and other metal emissions from hazardous waste combustors."[19] USEPA ended the email by asking Cooper's permission to ask him further questions pertaining to the Xact. Dan Bivens May 21, 2013 email at VES 016087.

Throughout 2013, USEPA continued to ask Cooper to provide USEPA with what USEPA's response should be on additional fundamental points Veolia raised: the use and availability of the Xact CEMS (Dan Bivens May 21, 2013 email at VES 016087); how long it would take to order and install an Xact CEMS (*id.*); OTM 16 and 20 (Dan Bivens May 23, 2013 email at VES 015839); the Quantitative Aerosol Generator ("QAG") calibration method (*id.*); whether the MATS rule referenced multi-metals CEMS (Dan Bivens May 23, 2013 email at VES 015711-015713); and the basic operational technology of the Xact CEMS (Kim Garnett May 23, 2013 email at VES 012314-012315). *See also* Krag Petterson July 17, 2013 email at VES 015660-015663, which addresses several of these issues.

[19] USEPA has retained this false statement in its Statement of Basis for the draft 2014 permit at p.59.

Cooper frequently failed to provide a substantive response to USEPA's inquiries concerning the legitimate points that Veolia raised. Rather, Cooper would delay responding (John Cooper May 23, 2013 email at VES 015839); admit that Veolia's comments concerning the Xact 640 not being employed elsewhere were true, but provide excuses (Andrea Geiger July 10, 2013 email at VES 016102; John Cooper May 29, 2013 email at VES 010411); allege a lack of knowledge (*id.*); or provide non-responsive answers and reference or repeat information from dated materials that only relate generally to the Xact CEMS (John Cooper May 28, 2013 email at VES 010776; John Cooper June 14, 2013 email at VES 010573; John Cooper June 26, 2013 email at VES 016100). USEPA failed to evaluate the legitimacy of such responses but rather simply included such responses in the administrative record without further analysis. In fact, the administrative record is devoid of any critical analyses by USEPA of the Xact CEMS technology or the responses Cooper offered. Based upon what is contained in the record, USEPA's Measurement Technology Group has little actual knowledge of the technology it is requiring Veolia adopt as part of the 2014 Draft Permit.

Incredibly, no one that advocates the installation of the multi-metals CEMS, including Cooper, has any knowledge as to whether it is viable at Veolia. In a July 10, 2013 email, Cooper's Director of Sales and Marketing states, "I think my main concern is that there simply aren't that many stack units in existence, despite the fact that we have proven the technology works." Andrea Geiger July 10, 2013 email at VES 010898. The statement in the email that there "aren't that many stack units in existence" is an exaggeration—in fact, there are none. David Ogulei, Region 5's permit writer, admitted during an October 21, 2014, meeting with Veolia, no multi-metals CEMS exists on any commercial hazardous waste incinerator in the world. Warchol Aff. at VES 019308. Further, the only reference Krag Petterson of Cooper offered to Veolia for the use of the Xact 640 technology was the failed experiment at Eli Lilly over four years ago. Warchol Aff. at VES 019309. Cooper's Director of Sales provides the reason that the Xact CEMS is not used on any commercial hazardous waste incinerators: "[t]here are a few differences (between stack units and ambient units), and certainly the environmental conditions for a stack unit are much harsher than for an ambient unit, but the overall technology is exactly the same." Andrea Geiger July 10, 2013 email at VES 010898. However, the harsh environmental conditions present in Veolia's stacks are precisely why the Xact CEMS is not placed in such stacks. A freshwater fish has the same overall makeup as a saltwater fish, but would die in saltwater. Environmental conditions matter for the viability of the multi-metals CEMS.

USEPA needs to critically review the Xact 640 and the attendant sampling train. The difference between the Xact 640 and the Xact 625 ambient air monitor, which does not require a sampling train, are staggering. The Xact 640 multi-metal CEMS used for stack emission monitoring requires a sample train to bring the emission sample into the CEMS, while an Xact 625 multi-metals CEMS, which is in use as a fence line technology, simply collects ambient air directly. This distinction is important because as discussed by Michael Fuchs, Robert Baxter, Chris McBride, William Anderson, and the Coalition for Responsible Waste Incineration ("CRWI"), whose comments are offered separately, the Xact 640 sample collection methodology and other issues such as the multi-metals collecting and releasing from the probe and umbilical will cause

the multi-metals CEMS to be inaccurate.[20] *See infra.* Figure 1.4. It is not at all clear that a sample transport system for a multi-metals CEMS, as applied to Veolia's stacks, could be uniquely developed and designed to actually make the CEMS functional. In addition, fence line monitoring samples ambient air and is not designed to operate in the harsh high temperature, high variable moisture, and constantly changing environment which exists in Veolia's stacks.

USEPA was created for the purpose of protecting human health and the environment by writing and enforcing regulations based on laws passed by Congress. However, in this matter, it has relinquished its obligation to protect human health and the environment to third party profit seekers who are strangers to commercial hazardous waste incinerators. The Agency has ignored the statements of Veolia, the experts in the operation of its incinerators. Rather, USEPA requested Pall and Cooper to make a "case" to support requiring Veolia to purchase and install their product. Needless to say, Cooper ignored the sampling train problems and the hardware and software failures that caused past system failures in more welcoming environments than the environment at Veolia. *See* Sarah Marshall October 4, 2012 email at VES 001470. Pall and Cooper responded by telling USEPA what the Agency wanted to hear—an unsubstantiated and self-serving conclusion to the effect that the Xact multi-metals CEMS will work to monitor stack emissions from a commercial hazardous waste incinerator.[21]

During a meeting with counsel for USEPA on September 30, 2014, USEPA's counsel candidly admitted that she was unaware of any other occasion when Region 5 required a regulated entity to acquire a particular CEMS from a particular manufacturer as Region 5 requests Veolia do in its draft permit. *See* Warchol Aff.; Statement of Basis p. 54. In requiring Veolia to purchase the Xact CEMS, the Agency blindly accepted Pall and Cooper's conclusions and ignored the fact that Pall ultimately abandoned the technology and Cooper acknowledged the technology is untested in the harsh conditions present in Veolia's stacks. The Agency abdicated its regulatory obligation to determine whether the technology will effectively protect human health and the environment. The Agency had predetermined that the Xact CEMS was going to be required at Veolia and transferred the obligation to justify this predetermined answer to Pall and Cooper—strangers to Veolia's incinerators with a financial incentive to exaggerate the capabilities of the CEMS technology. On this basis alone, USEPA's decision is clearly arbitrary and capricious and the CEMS requirement should be removed.

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[20] Veolia generally offers the joint comments of William C. Anderson, Ph.D., Senior Analytical Project Manager, TestAmerica, Inc. and Chris E. McBride, P.E., Focus Environmental, Inc. VES 016777-016795; Robert W. Baxter, B3Systems, Inc. VES 016997-017002; Emma York, Evonik Manager, Environmental, Safety, Health and Security, VES 007596-007597; Ralph L. Roberson, President, RMB Consulting & Research Inc., VES 008290-008380; Michael Fuchs, Project manager in the Measurements Group in URS Corporation's Austin, Texas Office, VES 007598-7605 and VES 019283-019293; Doug Harris, General manager at Veolia ES Technical Solutions, L.L.C., VES 008384-008391; Dennis J. Warchol, Veolia Manager of Environmental, Health and Safety, VES 008381-008383 and VES 019308-019309; and Delana Owen, Franklin Engineering, VES 007606-007615, (collectively "Veolia's Experts") in opposition to the Draft Permit for the reasons stated in each of the comments and further referenced herein.

[21] Although Cooper ignored the problems of the Xact CEMS when touting the product to USEPA, Cooper recognizes the risks the Xact CEMS's problems pose when his profits are at risk—the product warranty associated with the Xact multi-metals CEMS expressly limits Cooper's liability to the purchase price of the Xact. VES 016556-016557.

D. Region 5 is Unreasonably and Unfairly Requiring Veolia to Install Multi-Metals CEMS.

1. *Veolia Is a Small Source of Mercury Emissions In the St. Louis Area*

As evidenced by the permitting and enforcement history set forth above, Region 5's primary concern since this process began has been Veolia's mercury emissions.[22] However, Veolia's yearly mercury emissions are magnitudes lower than other major sources of mercury emissions in the St. Louis area. As the table below shows, Veolia's estimated Toxic Release Inventory ("TRI") emissions for reporting year 2013 were a mere 3.1 pounds of mercury. *See* Veolia 2013 Form R at VES 019265-019270.

Facility	State	TRI Mercury Emissions for 2013 Reporting Year*	Method of Calculation	Approx. Distance & Direction from Veolia's Sauget Facility
Labadie Power Station	MO	823.2 lbs/yr	published emission factor	36.6 miles west
Rush Island Power Station	MO	402.5 lbs/yr	published emission factor	32.6 miles south
US Steel - Granite City	IL	223.41 lbs/yr	published emission factor	7.5 miles north
Sioux Power Plant	MO	194.9 lbs/yr	published emission factor	19.3 miles southwest
Baldwin Power Station	IL	82.7 lbs/yr	site-specific emission factor	32.6 miles southeast
Meramec Power Plant	MO	68.7 lbs/yr	published emissions factor	15.9 miles southwest
Mississippi Lime Concrete Plant	MO	54.16 lbs/yr	published emissions factor	45.0 miles south
Wood River Power Station	IL	41.3 lbs/yr	site-specific emission factor	18.4 miles north
Prairie State Energy Campus	IL	40.0 lbs/yr	site-specific emission factor	35.9 miles southeast
Wood River Refinery	IL	20.0 lbs/yr	published emissions factor	17.7 miles north
Veolia Incinerator	IL	3.1 lbs/yr	site-specific emissions monitoring	0 miles

*Values are from each facility's 2013 reporting year Form R, *at* www.epa.gov/enivro/facts/triform_r_search.html.

[22] This is evidenced by the fact that Region 5's 2013 reopening proposal included greater feedrate limits (i.e., more lenient limits) for LVMs and SVMs than those limits Veolia had established through performance testing. *See* Region 5 proposed Title V permit VES 000002-000135 (Jan. 2013).

This pales in comparison to the hundreds of pounds of mercury emitted by sources within a 45 mile radius of the Veolia facility. Specifically, Veolia is literally surrounded by coal-fired utilities that emit hundreds of pounds of mercury on a yearly basis. To the west, the Labadie power station emits a whopping 823 pounds of mercury a year. To the south, Rush Island power station emits over 400 pounds. To the southeast, Baldwin power station and Prairie State Energy (which are only 11 miles apart) combine to emit over a 100 pounds of mercury per year, and, just 7.5 miles to the north of the Veolia facility, US Steel in Granite City releases over 220 pounds of mercury into the atmosphere per year. In relative terms, Veolia's mercury emissions are only a tiny portion of the total mercury emissions of the greater St. Louis area. Thus, in relative terms, the Agency's continued haranguing of Veolia is misplaced.

2. *Veolia's MACT Metals Emissions Are Below the HWC MACT Limits by a Margin of Safety*

Throughout this tortured permitting history, Region 5 has alleged, without ever producing evidence (to Veolia or to a neutral third party, such as in an enforcement proceeding), that Veolia has been out of compliance with the mercury emission limitations of the HWC MACT. *See* Statement of Basis at 27-28. Yet, Veolia has maintained compliance with the HWC MACT, has kept its emissions below the limits by a margin of safety, and has provided, over the years, voluminous data and information to Region 5 documenting Veolia's HWC MACT compliance.

The HWC MACT, like all MACT rules, is designed to provide emissions limits that provide an "ample margin of safety" to protect the public health. *See* 42 U.S.C. § 7412(d)(4). In other words, the limits are set at levels that are low enough to ensure that, even if a source is emitting at the limit, the public will be protected. Veolia's emissions are consistently well below the applicable standards, particularly for mercury. For example, Veolia's *actual* mercury feedrate (i.e., how much material is actually fed into the incinerator) is, on average, less than ½ of Veolia's permitted feedrate limit for mercury. (Voluminous emissions data submitted to USEPA Region 5 by Veolia over the last five years pursuant to § 114 requests supports this assertion.) Thus, by emitting below an already-protective standard, Veolia is providing another margin of safety to the public and the environment.

Further, Veolia does not use extrapolation to establish any of its feedrates for mercury, LVM, and SVM, even though it is allowed to do so under the HWC MACT. *See* 40 C.F.R. §§63.1209(l)(1)(v) & 63.1209(n)(2)(vii). Extrapolation allows incinerators to achieve higher feedrates for these metals based on calculations made from the facility's CPTs. Veolia does not extrapolated metal feedrates from its CPTs—meaning that Veolia's feedrate limits are based on the actual test results achieved during the CPT. This practice builds in another layer of safety regarding Veolia's compliance with the emissions limits.

3. *The Requirement of the Xact CEMS Saddles Veolia with Unwarranted Cost*

USEPA makes it clear that the only multi-metals CEMS technology it considers to be commercially available is the technology that the Xact multi-metals CEMS utilizes. Statement of Basis at 54 n.16. By requiring Veolia to exclusively use the Xact CEMS, USEPA relinquished its independent status by advocating on behalf of Xact and reduced the incentive for

technical advancement while also prejudicing Veolia's rights as a consumer. If the Veolia permit were modified as proposed, in theory Cooper could charge Veolia any price it wishes for the Xact multi-metals CEMS. Roberson VES 008290-008302.

Further, the administrative record reflects that, while Cooper really has no idea what the precise cost will be to Veolia, the cost will be substantial. On September 16, 2013, Cooper's Project Manager sent an email to USEPA stating:

> [F]irst costs for purchase/installation/certification/training of a MM CEMS are anticipated to be approximately $365,000-$400,000*. The instrument runs about $260,000 of that cost. Annual costs will likely be about $25,000.**
>
> * Factors such as transport length, remote control/polling options, sampling interval (i.e. shorter sampling intervals require more tape), and installation complexities will have an impact on the overall initial budget for MM CEMS.
>
> **Annual costs depend largely on sampling interval. For a 30 minute sampling interval, filter tape costs run about $19,500/year. 15-minute sampling intervals double that amount annually. In addition, we recommend that companies budget for an annual X-ray tube replacement and re-calibration (appx. $5-6K). Annual labor generally requires one technician approximately 8-10 hours per month for tape changes and general operation and maintenance tasks.

Andrea Geiger Sept. 16, 2013 email at VES 015664. On March 24, 2014, Region 5 placed a memorandum in its file detailing a phone call with Cooper which states in relevant part:

> Each unit's purchase cost is about $250K. Approx. $900k ballpark total for 3 units including installation and testing but can't say for sure. Would need to visit the facility and do an appraisal of what is needed.

David Ogulei March 24, 2014 Phone Call Record at VES 010644. Two days later, on March 26, 2014, Region 5 placed another memorandum in its file detailing another phone call with Cooper which states in relevant part:

> Each unit's purchase cost is about $250K. Approx. $900K ballpark total for 3 units including installation and testing but can't say for sure. Would need to visit the facility and do an appraisal of what is needed.
>
> Operating costs primarily come from filter tape. For continuous operation (15 min samples), filter tape would cost $780 per roll per week ($41k per year) per unit. Total operating cost is approximately $50k per year per unit.

David Ogulei March 26, 2014 Phone Call Record at VES 010622. Cooper kept its monetary options flexible by including variable cost factors that could be used to increase the price.

Clearly, Cooper had an incentive to quote low prices to USEPA in order to appear reasonable to USEPA while attempting to use USEPA to force the third party regulated entity to purchase the

Xact CEMS. Similarly, USEPA had no reason to contest the prices quoted since it did not come out of USEPA's budget.[23] CRWI provides a more realistic cost figure for the deployment and implementation of the Xact CEMS, which is based upon its members' experience. CRWI estimates the total costs to comply with the multi-metals CEMS requirement in the 2014 Draft Permit will be more than $2.2 million. *See* CRWI comments on Veolia's 2014 Draft Permit. Further, substantial additional costs will be incurred for procurement of the sampling probes and transport systems, for site construction costs for the enclosures to house three multi-metals CEMS, for power and other utilities to be supplied to the CEMS, and for incinerator control system enhancements (to be performed by a third-party contractor) to integrate required data transfer between the CEMS and Veolia's control system. As a private party, Veolia should not have to bear these extreme costs for what amounts to a joint research project between Cooper and USEPA.

The fact that USEPA is "only" requiring the multi-metals CEMS for one year is of no help to Veolia. There is no secondary market for the Xact CEMS—once they are installed, the loss to Veolia is permanent. Further, although USEPA states "Veolia may discontinue use of the CEMS once EPA has sufficient information to verify the efficacy of the feedrate limits in assuring compliance with the HWC MACT emissions limits," given the numerous and varied information requests Veolia has received over the last several years, USEPA may very well never determine that it has enough information, and hence never allow Veolia to remove the CEMS.

In sum, without further explanation from USEPA, USEPA's sole source requirement that Veolia install the Xact 640 CEMS is improper. USEPA's demonstrated desire to force someone other than Cooper to bear the cost of researching and developing the Xacts also appears on its face, without further explanation, to be improper. USEPA is falsely stating in the draft permit that the Xact CEMS are "temporary" while leaving itself great leeway to make them permanent. USEPA's actions are unwarranted, prejudicial against Veolia and are not rationally based. Therefore, the CEMS requirement should be removed from the 2014 Draft Permit.

4. *Region 5's Requirement that Veolia Install the Xact CEMS Places Veolia at an Unfair Competitive Disadvantage*

Veolia's Sauget, Illinois facility exists for one reason—to incinerate waste safely and compliantly. Companies in the commercial hazardous waste incineration industry compete nationwide for business and each company in the industry is required to hold a Title V operating permit under the CAA. Through the draft permit, USEPA seeks to impose onerous and unfair permit conditions on Veolia—conditions that are being imposed on no other commercial hazardous waste incinerator in the nation—that threaten to shut down Veolia's three incineration

[23] The United States government requires certain precautions be taken and documented if it were to award a contractor with a sole source contract. *See e.g.* Federal Acquisition Regulation (FAR) Part 6, 48 C.F.R. Part 6; Competition in Contracting Act, 41 U.S.C. § 3301, *et seq.* However, USEPA has not allowed Veolia to take similar precautions. USEPA has prevented Veolia from seeking a competitive bid by instructing Veolia that Veolia must purchase the multi-metals CEMS from Cooper. Likewise, despite assurances to USEPA that its multi-metals CEMS will perform within Veolia's stacks, Cooper limits its own liability through its product warranty for the Xact multi-metals CEMS that expressly limits Cooper's liability to the purchase price of the Xact. USEPA is not dealing fairly with Veolia.

units and increase Veolia's operating costs to such an extent that the economic viability of Veolia's facility is in jeopardy.

Veolia has done nothing wrong to deserve Region 5 acting in such a prejudicial manner against it. Veolia is in compliance with the HWC MACT standard. USEPA admits Veolia's existing FAP includes verbatim all of the feedstream analysis provisions set forth in the HWC MACT rule and required by 40 C.F.R. §63.1209(c)(2)(i) through (vi). *See* Charles Hall July 18, 2012 Memo. at VES 001293; Statement of Basis at 47. As a policy matter, USEPA has already determined, through promulgation of the HWC MACT, that feedstream analysis is the best method for ensuring that the OPLs are assuring compliance with the emissions limits. USEPA's inclusion of multi-metals CEMS in Veolia's permit as a "parametric monitor" for the FAP is unprecedented. *See* Warchol Aff. at VES 019308; Fuchs Aff. at VES 019293. Veolia's reliance on its FAP is authorized by the HWC MACT and has been proven to be effective through CPT testing. The CPT testing was performed pursuant to a plan that USEPA approved and the testing was conducted while USEPA was present. No other commercial hazardous waste incinerator in the United States has the requirement of a multi-metals CEMS as a parametric monitor or otherwise.

Veolia simply requests that Region 5 treat it identically to its competitors and stop acting in a prejudicial fashion towards it. Region 5's requirement for the installation of three multi-metals CEMS is baseless. Region 5 should be able to satisfy any question it has concerning the adequacy of Veolia's feedrates by working within the framework of the HWC MACT and, if necessary, creating a more robust FAP. USEPA has not subjected Veolia's competitors, each of who operate pursuant to OPLs and a FAP in order to meet the HWC MACT requirements, to a multi-metals CEMS requirement. In light of this, during meetings with Region 5, Veolia has offered to operate pursuant to a FAP that USEPA has already approved for Ross. Warchol Aff. at VES 019308. Region 5 has rebuffed Veolia's offer without consideration or explanation.

Region 5's actions toward Veolia are prejudicial. Moreover, the installation of a multi-metal CEMS on each of Veolia's incinerators—when none of Veolia's competitors are required to install and maintain such costly equipment—simply has no rational basis.

5. *Region 5's Draft Permit Condition Requiring the Installation of Multi-Metals CEMS Within 365 Days Is Impractical*

The proposed 2014 Veolia permit states in relevant part:

> The Permittee shall install, calibrate, maintain and operate an x-ray fluorescence multi-metals CEMS for use as a continuous parametric monitoring system (CPMS) on Units 2, 3 and 4 within 12 months (365 days) after this permit becomes effective, unless the Administrator determines that a time extension is warranted based on the Permittee's documentation in writing of factors beyond its control that prevent the Permittee from meeting the 12-month deadline.

2014 Draft Permit at 34 (VES 009111). USEPA's belief that three multi-metal CEMS can be installed, be calibrated, be operational and receive regulatory approval within a year is not supported by the administrative record.

As already related herein, Region 5 has a sordid history of inaction and delay in meeting regulatory deadlines with regard to Veolia's facility. The Agency failed to offer any comments on Veolia's first Title V draft permit application; it failed to meet the mandatory deadline for ruling upon Veolia's past application for significant modification; it has failed to take any action to conclude various NOVs/FOVs issued throughout the years; and it abandoned its efforts to reopen Veolia's Title V permit. Given this track record, Veolia has no confidence that Region 5 could act in a timely fashion to approve the CEMS or grant an extension of time in the absence of approval.

Further, the record does not support that multi-metals CEMS can be installed and operational with regulatory approval on Units 2, 3 and 4 within 12 months. In 2012, Pall, the exclusive distributor of Cooper's multi-metals CEMS technology, informed Veolia that Pall could not deliver, install, calibrate and have *one* exact multi-metals CEMS operational within 180 days.

On July 18, 2013, Cooper represented to USEPA in an email that it would take 4 to 5 months to deliver one unit and another 2 to 3 months to get the Relative Accuracy Test Audit ("RATA") scheduled and completed on that one unit. *See* Cooper July 18, 2013 email at VES 015660. Less than a year later, Cooper revised its projection in a March 24, 2014 phone call with USEPA and stated:

> [b]uilding the units would not be a problem. 9 months should be adequate to install and begin operating the three units. 12 months should definitely not be a problem. Variables include the types of stack modifications and other site-specific facility modifications needed to accommodate the CEMS.

David Ogulei March 24, 2014 Phone Call Record at VES 010644. However, Cooper's estimated timeframe only accounts for the Xact CEMS and not for other variables. Variables unique to each installation such as the construction of the sampling train, electrical needs, the construction of shelters and the programming are not accounted for by Cooper because these unique items are constructed by others. Based on Veolia's experience, these variables will take at least 24 to 36 months to construct and become permitted after the CEMS are delivered and receive regulatory approval. Warchol Aff. at VES 019308-019309. Further, USEPA ignores timeframes set forth in its own regulations for the installation and performance tests of newly acquired CEMS. *See* 40 C.F.R. Part 51, Appx. P (provides affected sources 18 months or more to install and perform tests on newly required CEMS). Additionally, documents in the administrative record reflect that it took Eli Lilly three years to resolve installation problems and to obtain the necessary regulatory approval to operate *one* Xact CEMS as an alternative method. *See* VES 001013.

USEPA has requested *three* multi-metals CEMS be installed at Veolia. Veolia therefore expects the time necessary to get these units sufficiently operational for USEPA's approval will be two years or more. Veolia uses the incinerators every day. It cannot wait two years or longer to operate its incinerators while USEPA considers whether the multi-metals CEMS are properly installed, calibrated, maintained and operational for Veolia to obtain the necessary regulatory approval from USEPA.

The proposed permit provides that an extension of the 12-month deadline is available if the "Administrator determines a time extension is warranted based on the Permittee's documentation in writing of factors beyond its control that prevent the Permittee from meeting the 12 month deadline." 2014 Draft Permit at 34. Veolia is in the incineration business and the incinerators are its business. Veolia cannot operate its business on the vagaries of whether an extension of time is warranted based upon the Agency's evaluation and determination of whether something is under Veolia's control. To operate its business effectively, Veolia must have more certainty than is offered in the proposed permit.

Further, Veolia is in the business of safely disposing of hazardous waste, not installing and testing CEMS. Nor is Veolia in the business of installing and operating CEMS as a research project for Region 5. Region 5 has nothing at stake in proposing that Veolia install three multi-metals CEMS. Similarly, Veolia cannot afford to bet the future viability of its operations on the representations of someone like Cooper, who has a vested financial interest in misrepresenting the timeframe that his product can be produced, installed and approved by USEPA.

In light of the Agency's inability to meet deadlines throughout Veolia's permitting history and Eli Lilly's efforts for three years to make the CEMS operational and obtain regulatory approval, USEPA does not have a track record of promptly evaluating and responding to submissions related to this technology. The practical result, should the proposed modifications to the permit be forced upon Veolia, is that Veolia will have to shut down its Sauget operations because the multi-metals CEMS cannot be delivered, installed, calibrated and operational within the 12-month deadline. Thus, as drafted, the proposed permit is equivalent to a shut-down order directed to Veolia.

6. *USEPA Should Promulgate a National Standard That Attempts to Impose Multi-Metal CEMS On All Hazardous Waste Combustors*

Region 5 posits that the multi-metals CEMS are necessary to "verify that the feedrate limits and the feedstream analysis procedures proposed in this Title V permit renewal are sufficient to assure continuous compliance with the HWC MACT emissions limits" Statement of Basis at 54 (VES 009303). Specifically, Region 5 sets forth that CEMS are necessary to correct deficiencies with the monitoring requirements currently devised under the HWC MACT:

> [f]eedstream analysis generally poses several challenges including the uncertainty associated with 1) measurement of extremely low metal concentrations in the feedstream (i.e., concentrations at or near the detection limit of the measurement device); 2) heterogeneity of the hazardous waste, which may lead to a non-representative sample and hence an inaccurate estimate of the metal feed concentration; and 3) inability to demonstrate continuous compliance with MACT limits, as required by the HWC MACT, since there is generally a considerable time lag between sampling and analysis.
>
> The uncertainties caused by feedstream analysis can be largely resolved when a well-maintained and operated CEMS is used to directly identify deviations from emission limitations that may result from inaccurate or insufficient feedstream analysis.

Statement of Basis at 56 (VES 0009305).[24] The purported challenges enumerated by USEPA are not unique to Veolia; rather, if they exist at all, they are common to each and every emissions source regulated under the HWC MACT. As currently devised, the HWC MACT requires sources to employ a system of OPLs and feedstream analysis to ensure that they meet the emissions limits set forth for mercury, SVMs, and LVMs. *See* 40 C.F.R. § 63.1209(l) ("You must comply with the mercury emission standard by establishing and complying with the following [OPLs]"); § 63.1209(n) ("You must comply with the semi volatile metal (cadmium and lead) and low volatile metal (arsenic, beryllium, and chromium) emission standards by establishing and complying with the following [OPLs]"); and § 63.1209(c) ("Prior to feeding the material, you must obtain an analysis of each feedstream that is sufficient to document compliance with the applicable feedrate limits provided by this section"). For Veolia alone, Region 5 is now stating that the explicit directives of the HWC MACT are insufficiently certain and that multi-metals CEMS are necessary to assure the feedstream analysis complies with the standard. Because all hazardous waste combustors in the United States rely on OPLs and feedstream analysis to comply with the HWC MACT emission limits, Region 5's apparent change in policy regarding the adequacy of OPLs and feedstream analysis should be applied to all hazardous waste combustors—not just Veolia.

In light of Region 5's pronouncement, all sources under the HWC MACT must now be concerned that reliance on a FAP to meet OPLs, without a multi-metals CEMS, could cause them to be out of compliance and possibly subject to enforcement. Moreover, in the very least, it is unclear whether USEPA still believes feedstream analysis is sufficient to maintain compliance with the standards. Thus, because USEPA has now created uncertainty over a whole class of sources regarding the appropriate means of compliance, the Agency should undertake industry-wide notice and comment rulemaking to propose multi-metals CEMS and the enhanced feedstream requirements now being proposed for Veolia. Such rulemaking would have several advantages over imposing these requirements in piecemeal fashion in individual Title V permits. Specifically, it would allow the entire hazardous waste combustor industry to work with the Agency in developing these monitors for the purposes of compliance. This would advance the technology further and faster and lead to better overall metals monitoring across the entire industry. Promulgating the use of multi-metals CEMS across the entire industry would also spread the costs of development among all sources regulated under the HWC MACT—instead of arbitrarily and capriciously imposing all of those costs on Veolia. Finally, and most importantly, if USEPA believes that the current system of OPLs and feedstream analysis does not sufficiently assure compliance with the HWC MACT, then the Agency has a duty to the public to promulgate a rule requiring the development of multi-metals CEMS across the entire hazardous waste combustor industry. *See* 42 U.S.C. § 7661c(b).

[24] For statement number three, USEPA offers no explanation as to what is meant by "lag" with regard to the sampling and analysis performed pursuant to the FAP; nor is it clear how this relates to HWC MACT compliance. Veolia characterizes its waste stream for metals prior to incineration. Further, as written, USEPA's third statement is vague and confusing and is thus arbitrary and capricious.

E. Region 5's Representations Concerning Multi-Metals CEMS Technology are Incorrect, Misleading and Unsubstantiated

USEPA must provide proof of its statements in support of its permitting decision, not just make unsupported assertions. *See Northeast Maryland Waste Disposal Authority v. EPA*, 358 F.3d 936, 954 (D.C. Cir. 2004). Unfortunately, the Statement of Basis contains numerous incorrect, misleading or unsubstantiated statements on critical issues in the 2014 Draft Permit.

Region 5's substantive discussion of multi-metals CEMS technology begins in the Statement of Basis on page 52 under §5.3, entitled "Multi-Metals Continuous Monitoring Requirements," and ends on page 63. Veolia's specific comments on these provisions are as follows.

1. *Veolia's Comments on §5.3.1 (Overview of Requirements)*

The Agency's entire argument that Veolia should be required to install multi-metals CEMS to monitor each of its stacks is premised, in large part, on a simple belief:

> During the period in which the multi-metals CEMS is operating, a correlation can be determined between the emissions concentration values reported by the multi-metals CEMS and the feedrate concentrations reported through feedstream analysis. Veolia then will use the data from the multi-metals CEMS as an indicator of whether or not the feedrate limits are sufficiently stringent to assure continuous compliance with the metals emissions limits in the HWC MACT at each of the combustion units.

Statement of Basis at 54.

Region 5's belief that a correlation between the multi-metals CEMS data and the feedrate concentrations reported through feedstream analysis is wrong. A multi-metals CEMS has never been attached to an operating commercial hazardous waste incinerator and accurately reported multi-metal emissions concentration values. Further, an EPA approved method has never successfully been used to correlate the results of a multi-metals CEMS to materials fed into a commercial hazardous waste incinerator as part of a feedstream analysis plan. There is simply no evidence to support that under such conditions a correlation can be accurately made between the emissions concentration values reported by the multi-metals CEMS and the feedrate concentrations reported through the feedstream analysis.

The evidence is that, given the conditions at Veolia, no correlation can in fact be made. Veolia has offered evidence based on published reports and expert statements of individuals who have relied upon published reports and extensive personal experience sampling for particulate material which would include multi-metals. *See* comments of Veolia's Experts (citations provided *supra* in note 20.) As reflected in Veolia's Experts' statements and in figures below, the evidence shows that the Xact 640 CEMS has many problems. One of these problems is that metals will accumulate in the probe and umbilical and the metals will not be sampled by the multi-metals CEMS contemporaneously with the material being incinerated.

Figure 1.1

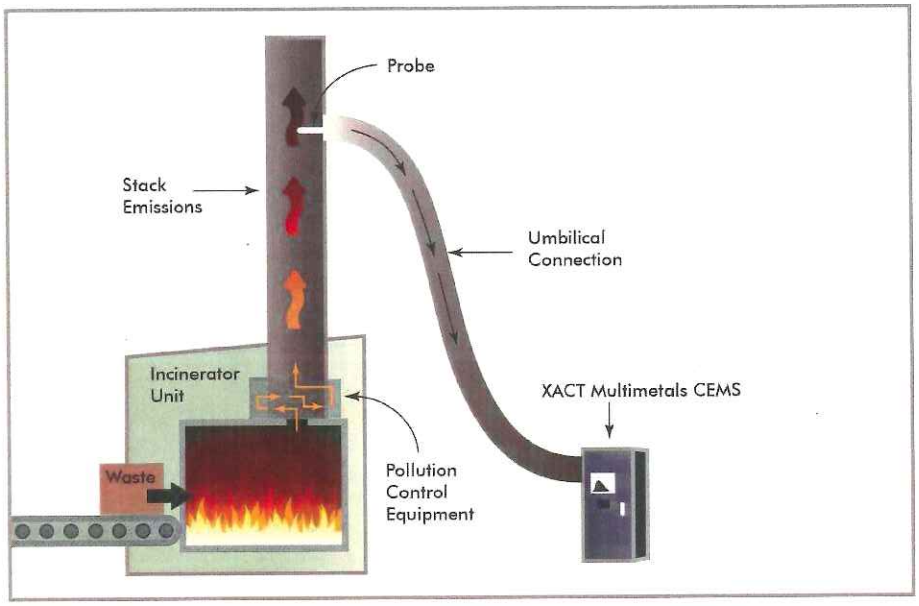


Figure 1.2

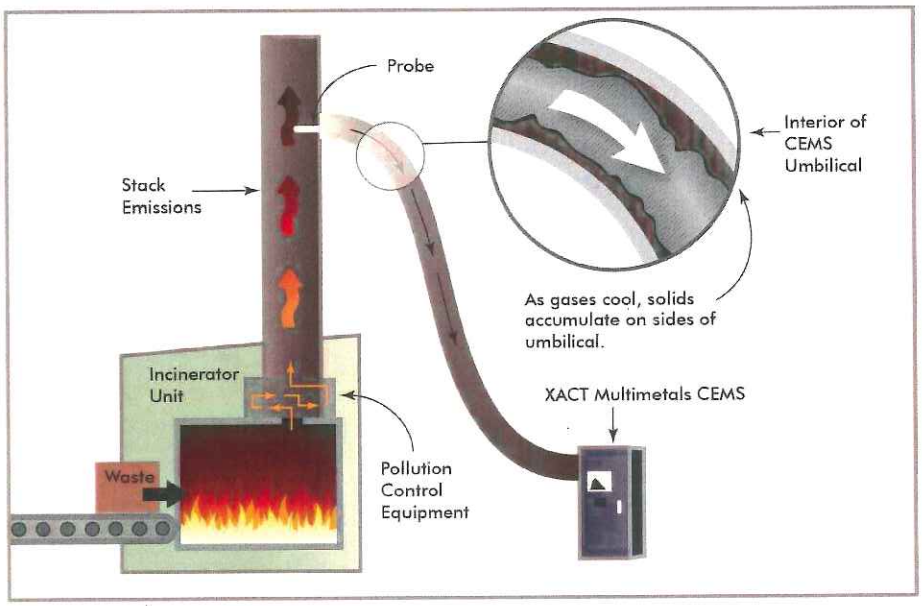


Figure 1.3

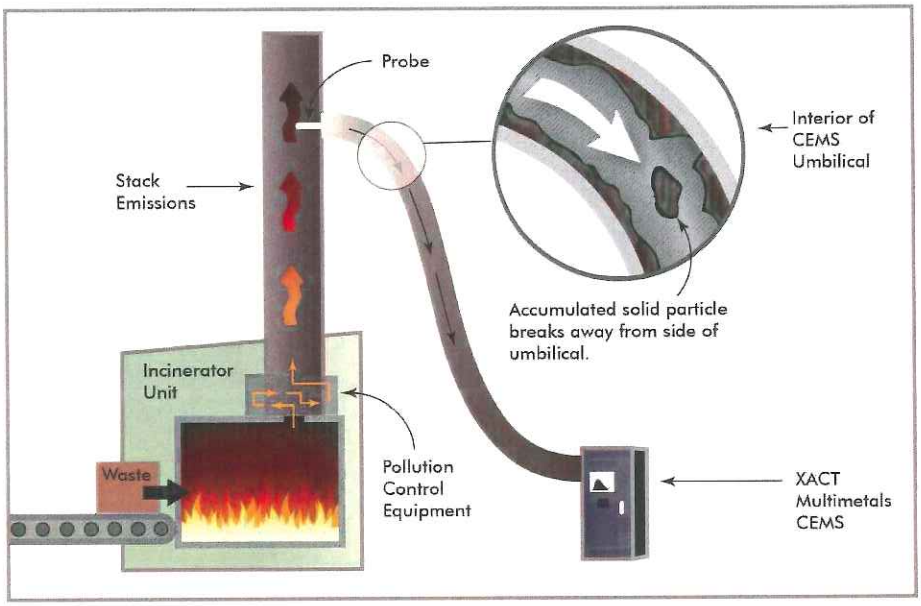
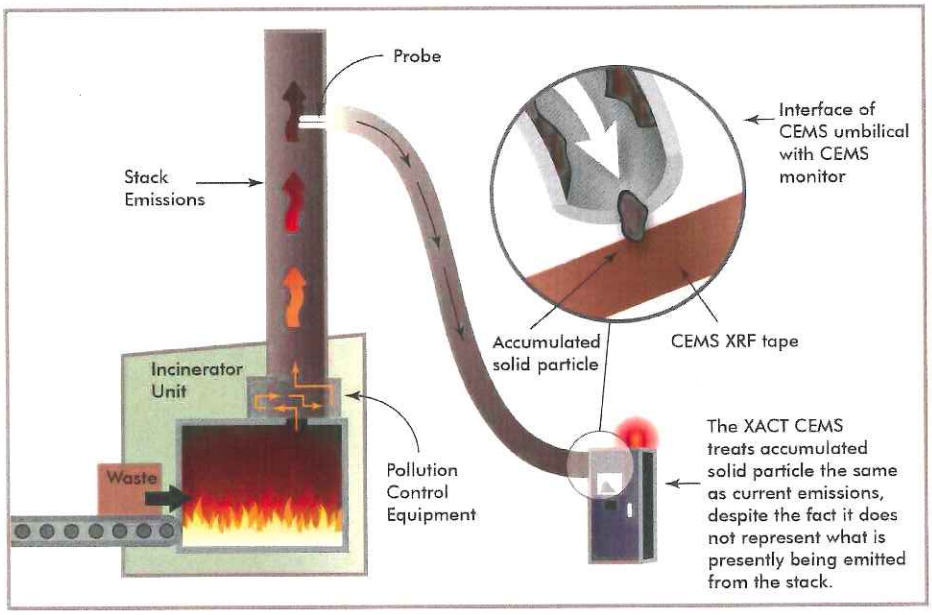


Figure 1.4



Therefore, a correlation between the multi-metals CEMS data and the material being incinerated cannot be established.

Unfortunately, Region 5's inaccurate belief as to the multi-metals CEMS ability and the Agency's failure to consider likely problems in the sample acquisition system significantly prejudice Veolia:

> Under EPA's proposal, the multi-metals CEMS will provide evidence of deviations that may demonstrate that the feedrate limits in the Title V permit are not stringent enough to assure compliance with the HWC MACT limits at all times.

Statement of Basis at 55. For the reasons set forth above, multi-metals CEMS data created at Veolia is too unreliable to be used as evidence. Region 5 should not use such data to determine Veolia's feedrates. Any attempt by the Agency to set feedrate limits based upon such data will lead to inconsistent and prejudicial results.

2. *Veolia's Comments on §5.3.2, "Multi-Metals CEMS and Feedstream Analysis"*

Region 5 sets up strawman arguments for challenges posed by feedstream analysis with regard to HWCs without citation to any authority or evidentiary support. *See* Statement of Basis at 56. These challenges were present when the HWC MACT was developed. If Region 5 has issues with the HWC MACT, the appropriate manner in which to address such issues is through rulemaking and not through the Title V process. In any case, absent evidentiary support, Region 5's assertions against the feedstream analysis procedures set forth in the HWC MACT cannot be validated or even reasonably evaluated.

While a multi-metals CEMS might in theory address the challenges presented by Region 5 as being associated with feedstream analysis, multi-metals CEMS are not approved for use in the HWC MACT nor are they included in Title V or its implementing regulations. Moreover, the multi-metals CEMS technology has not been analyzed and verified by USEPA or sources regulated under the HWC MACT. Rather, as evidenced by the documents the Agency has placed in the administrative record, the only entity that claims to have vetted and verified the multi-metals CEMS is Cooper, who has a pecuniary interest in its success.

Region 5 states "[t]he uncertainties caused by feedstream analysis can be largely resolved when a well-maintained and operated CEMS is used to identify deviations from emissions limitations that may result from inaccurate or insufficient feedstream analysis." Statement of Basis at 56. (VES 0009305). This statement has no support or evidentiary basis. In fact, the phrase "well-maintained and operated CEMS" is nonsensical in relation to an Xact multi-metals CEMS since none are currently in operation at any hazardous waste incinerator. Fuchs Aff. at VES 019292. Veolia requests Region 5 specifically define what is meant by this statement. At most, Region 5 is using such terms in order for Region 5 to have a defense that the CEMS were not "well-maintained and operated" when they are ultimately unsuccessful at Veolia.

USEPA has made unwarranted assumptions with regard to the CEMS technology and has offered no evidence that it has independently substantiated any of the claims. In contrast, Veolia has offered a great deal of unrefuted evidence that the CEMS technology will not work in Veolia's incinerators. *See* Statements by: Ralph Roberson, President of RMB Consulting &

Research (VES 008290-008380); Michael Fuchs with URS Corporation (VES 007598-007605 and VES 019283-019293); Emma York with Evonik Industries (VES 007596-007597); Dennis Warchol with Veolia (VES 008381-008383 and VES 019308-019309); Robert Baxter with B3 (VES 016997-017002), William Anderson with TestAmerica and Chris McBride with Focus Environmental, Inc. (VES 016997-017002; VES 016777-016795).

3. *Veolia's Comments on §5.3.3, "Deficiencies in Veolia's Current Emissions Monitoring Procedures"*

(i) Region 5 incorrectly views as a deficiency the fact that Veolia's October 2013 comprehensive performance tests revealed that Veolia's three incineration units have significantly different emissions that may not be linear

Region 5 has always required Veolia to test its three incineration units separately, believing that each would have significantly different emissions. Region 5's view on this point is set forth in detail in a memorandum from Charles Hall, an environmental engineer with Region 5, which discusses, in relevant part, Veolia's CPT test plan and Region 5's rejection of Veolia's request to use data from Incinerator #2 to establish OPLs for Incinerator #3:

> Veolia wanted to use test data from Incinerator #2 to demonstrate compliance and establish OPLs for Incinerator #3…[however] Veolia has not yet demonstrated to EPA's satisfaction that Incinerators #2 and #3 are identical: Incinerator #2's baghouse has four modules, and Incinerator #3's baghouse has three modules. This difference may affect the emissions of dioxin/furan, mercury, PM, SVM, LVM, and HCL/CL2 … hazardous waste incinerators burn wastes that can vary widely in their heat content and elemental composition. Waste streams can vary from one hour to the next. Liquid wastes can separate into two or more phases. Consequently, EPA cannot reasonably assume that a hazardous waste incinerator – especially one such as Veolia that accepts hazardous waste from numerous generators – burns a homogenous waste stream.

VES 007534-35. Thus, Region 5 has always required Veolia to test Units #2 and #3 separately. Similarly, USEPA has always required that Unit 4 be tested separately due to its carbon injection control system which makes it difficult to compare Unit 4's emissions to those of the other units. VES 007533-007536. Test results that show different emissions of mercury from Units #2 and #3, despite nearly identical mercury feedrates to Units #2 and #3 are consistent with Region 5's pre-existing beliefs.

Thus, nothing has changed from Region 5's initial view and this point cannot now be identified as a "deficiency" in support of a multi-metals CEMS.

(ii) Veolia's CPT results demonstrate compliance while generating emissions under the worst case operating conditions for the particular combination of wastes incinerated and combustion conditions at the time of the test

To demonstrate compliance during periods between compliance tests, the HWC requires sources comply with OPLs that are representative of operating levels achieved during compliance testing required by the HWC MACT. *See* 40 C.F.R. § 63.1207; Statement of Basis at 37. Region 5 admits that the emission levels achieved during compliance tests are typically the highest emission levels a source emits under reasonably anticipatable circumstances. *See* 69 Fed. Reg. 21197, 21218 (April 20, 2004); *see also* 40 C.F.R. §§63.1206(b)(2), 63.1207(f)(1), (g)(1); Statement of Basis at 39. Despite USEPA's admissions, and the regulations which support these admissions, Region 5 attempts to limit the applicability of the CPT by stating "[t]he CPT demonstrates compliance only for the particular combination of wastes incinerated and combustion conditions at the time of the test." Statement of Basis at 59. Region 5's efforts are similar to someone questioning a successful Mount Everest mountain climber's ability to climb a flight of stairs.

CPT test plans are designed "to generate emissions under worst case operating conditions" in order for a source to "establish OPLs that account for variability in operations (e.g., composition and feedrate of waste, as well as variability of pollution control equipment efficiency) and that do not impede normal operations." Statement of Basis at 39; 69 Fed. Reg. at 21309-10, nn. 202 & 204. Region 5 found that Veolia's revised CPT plans and Quality Assurance Project Plan ("QAPP") were complete, as required by the HWC MACT, and therefore approved Veolia's CPT test plan and QAPP in correspondence dated September 27, 2013. VES 019294-019295. Following the completion of the testing, the Agency reviewed Veolia's CPT test report dated January 28, 2014, and Veolia's Notification of Compliance dated January 28, 2014, and determined that there is sufficient information to enable Region 5 to establish OPLs for mercury, SVM and LVM that satisfy the requirements of the CAA and the HWC MACT. VES 009289.

Thus, Region 5 approved both Veolia's test plan and the accuracy of Veolia's test results. Given Region 5's intimate involvement in every step of Veolia's CPT testing, Region 5 cannot now credibly allege that such testing was not under the worst case operating conditions or otherwise limit the applicability of the results in any fashion.

4. *Veolia's Comments on §5.3.4, "Availability of Multi-Metals CEMS"*

Paragraph 1 contains three principal assertions: 1) multi-metals CEMS are commercially available; 2) they have been demonstrated to be reliable; and 3) the multi-metals CEMS will allow Veolia to measure compliance in "real time." These assertions are wholly unsupported by the facts.

Region 5 makes absolutely no effort to provide support to its first statement in paragraph 1, "[m]ulti-metals CEMS are commercially available and have been proven to be reliable for measuring actual emissions of HAP metals from a hazardous waste combustor." Statement of Basis at 59. The fact is that multi-metals CEMS have not been proven to be reliable in daily use at a commercial hazardous waste incinerator such as Veolia.

The Statement of Basis goes on to allege "EPA has monitored side-by-side evaluations of multi-metals CEMS with EPA Method 29 ... at industrial waste incinerators and found good correlation between the two methods." *Id.* As a reference for this statement, USEPA cites to 75 Fed. Reg. 31,962 (June 4, 2010). The quote used in the Statement of Basis is copied directly from the *Federal Register*. Unfortunately, the *Federal Register* excerpt appears in the preamble to a proposed rule and cannot be verified because it contains no reference or documentation. As Michael Fuchs discusses at length in his comments, multi-metals CEMS have never been demonstrated against USEPA Method 29. Fuchs Aff. at VES 019283-019293.

USEPA admits that multi-metals CEMS are not required in the recently promulgated mercury and air toxics (MATS) rule, although "EPA considers multi-metals CEMS as an accepted option for metals emission compliance." 77 Fed. Reg. 9303 (Feb.16, 2012). The term "multi-metals CEMS" does not appear in MATS. The MATS rule does state that an affected facility may comply with the metal HAP emission limits using a CEMS approved in accordance with § 63.7(f) as an alternative to the test methods specified in the MATS rule.[25] Assuming that a "HAP metals CEMS" is functionally equivalent to a "multi-metals CEMS," under the rule, a facility that wishes to use that alternative has the burden of selecting the CEMS, and developing the site-specific testing procedures. The MATS rule contains no performance specifications for the HAP metals CEMS, despite the fact that OTM 16 and OTM 20 existed at the time the MATS rule was issued. The MATS rule states that an affected facility may petition the Administrator to use a HAP metals CEMS as an alternative method. USEPA failed to consider that a multi-metals CEMS is only an acceptable option for metals emission compliance in the MATS rule "if approved as part of an alternative monitoring request." *See* 77 Fed. Reg. at 9,304, 9,386.

Further, the Agency suggests in the Statement of Basis that a regulated entity's ability to petition USEPA to use a HAP metals CEMS as an alternative method supports requiring multi-metals CEMS for measuring actual emissions from a hazardous waste combustor. This is unjustifiable and misleading. In fact, the MATS rule establishes that multi-metals CEMS are not commercially available and are not a demonstrated alternative that USEPA can require without evidence that it is proven to be reliable.

The second paragraph states, without substantiation, that "EPA recently evaluated, at several facilities, a commercial version of a multi-metals CEMS capable of measuring up to 20 or more HAP metals in real time." The statement fails to identify the facilities or type(s) of facilities, the test conditions (including whether the tests were conducted in commercial hazardous incinerators), whether the version evaluated is the same as the version Region 5 discusses throughout the rest of the Statement of Basis, whether the version evaluated in fact measured 20 or more HAP metals in real time, and what the results of that evaluation were. Absent such information, the sentence provides no support to the Statement of Basis discussion.

The remainder of the second paragraph relies upon materials that Cooper developed or contributed to as support for the statements contained therein. *See* Statement of Basis at 59-60 & nn.51-55. Region 5 fails to consider Cooper's vested interest in reporting that the CEMS was a

[25] 77 Fed. Reg. 9478 (Feb. 16, 2012).

success. The Agency has offered no evidence that USEPA independently verified the claims made by these entities.

The third paragraph reflects the Agency's continued failure to independently evaluate the Xact multi-metals CEMS:

> Cooper Environmental Services has also developed and received EPA approval for a Quantitative Aerosol Generator (QAG), which generates a reference aerosol for calibrating the multi-metals CEMS and for performing relative accuracy test audits (RATAs) of the multi-metals CEMS. Yanca *et al.* evaluated both the Xact and the QAG using a modified EPA Method 301 at a hazardous waste combustor by comparing measured and reference aerosol concentrations. The authors found that both the Xact and the QAG met the Method 301 validation criteria with precisions and accuracies on the order of 5 percent over a wide range of concentrations.

Statement of Basis at 60 (footnotes omitted). Region 5 fails to cite to any independent verification of the QAG. Historically, a group of companies have designed, developed and marketed CEMS (e.g., Thermo Fisher, Monitor Labs, California Analytics, etc.). Another completely independent group of companies have manufactured and supplied the market with calibration gases (e.g., Air Liquide, Airgas, Linde, etc.). Roberson Aff. at VES 008295. In the present case, USEPA failed to consider problems that may arise due to Cooper, the developer, providing both the available performance specifications and the calibration materials. Region 5 has instructed Veolia to purchase and install the multi-metals Xact CEMS sold by Cooper, use the draft performance specifications written by Cooper to determine whether the CEMS operates accurately, and calibrate the CEMS to determine accuracy by using materials supplied by Cooper. USEPA's total reliance on Cooper is not appropriate—specifically in light of the undeveloped state of the multi-metals CEMS technology and its questionable accuracy—because Cooper has pecuniary incentives to represent the technology had capabilities beyond it limits. Without other companies' participation, no independent means exist to establish that the Xact CEMS produces accurate and reliable data for compliance.

Further, the references Region 5 provides in paragraph 3 and in footnotes 56 and 57 also show the Agency's failure to consider Cooper's vested interest in reporting that the CEMS was a success. USEPA has offered no evidence that USEPA independently tested the assertions it repeats from these sources.

Incredibly, USEPA uses paragraph 4 to tout in a positive fashion the Xact CEMS which failed at the former Eli Lilly facility. The Xact CEMS failed on the Eli Lilly non-commercial hazardous waste incinerator due to software and firmware problems and was removed from service permanently in August of 2011 by Evonik, the owner of the facility. Evonik Aff. at VES 007596. During its operation, Evonik used the Xact CEMS in a very limited capacity, namely during RATA and performance testing only; found the Xact CEMS to be costly in terms of time

and maintenance; and never relied on it for official monitoring purposes under the site's Title V permit.[26] Evonik Aff. at VES 007596-007597.

The Agency also failed to consider the differences between the former Lilly Incinerator and Veolia's incinerators. An obvious difference is that, when Evonik operated the incinerator, it was not a commercial hazardous waste incinerator like Veolia's. Evonik Aff. at VES 007596. Veolia's incinerators, and commercial hazardous waste incinerators like Veolia's, receive widely diverse waste streams from unrelated industries which, Region 5 recognizes, results in a heterogeneous waste stream. Statement of Basis at 50 (VES 009299). Due to the variety of feedstreams Veolia accepts, the significant variance in metals content would likely affect the ability of multi-metals CEMS to produce valid data over an extended period. Fuchs Aff. at VES 007600.

Most incinerators, including the former Eli Lilly incinerator, employ wet scrubbers or a combination of wet scrubbers and baghouses as their pollution control equipment. The off gases from incinerators using wet scrubbers have similar moisture and temperature ranges. The suppliers of the Xact Multi-Metals CEMS claim that the Xact analyzes the off gas emitted from an incinerator to determine the amount of metals in the emissions stream. Unlike wet scrubber systems such as that employed by the Lilly Incinerator, Veolia operates a dry pollution control system on Units 2, 3 and 4 of its Sauget facility. To Veolia's knowledge, only one other exclusively dry system operates in the United States: the Clean Harbors incinerator in Kimball, Nebraska. Veolia's dry pollution control systems operate at much higher moisture and temperature ranges than wet scrubber systems. Region 5 offers no documentation demonstrating that the Xact Multi-Metals CEMS has successfully operated in the high variable moisture and high temperature environment presented by Veolia's incinerators. Warchol Aff. at VES 008381-008382.

Eli Lilly's experience establishes that the multi-metal CEMS is costly in terms of time and maintenance and that its software and firmware failed in the comparatively more friendly, non-commercial hazardous waste environment involving a homogenous feed stream. The Xact CEMS has never been proven to be reliable in measuring actual emissions of HAP metals in a commercial hazardous waste environment involving a heterogenous feed stream such as Veolia. Fuchs Aff. at VES 007599-007601; Evonik Aff. at VES 007596; Warchol Aff. at VES 008382; Roberson Aff. at VES 008290-008302.

Likewise, Region 5's allegation that the multi-metals CEMS can work effectively in moisture laden environment of the stacks at Veolia has no true, tested support. Statement of Basis at 60, n.58. Rather, it is based on an untested "assurance" from Cooper. Cooper has a financial incentive to make this assurance. Veolia has countered Cooper's assurance with evidence from experts in the field that the Xact will not work at Veolia. *See* comments of Veolia's Experts

[26] On October 4, 2012, USEPA's Sarah Marshall sent an email to other USEPA staff discussing Evonik's experience with the multi-metals CEMS and indicating that further discussions directly with Evonik would occur. *See* Sarah Marshall Oct. 4, 2012 email at VES 001470. However, no documents are contained within the administrative record reflecting the content of those subsequent discussions. Veolia requests that USEPA disclose and add to the administrative record all communications with Evonik pertaining to the CEMS. Further, Veolia requests that the public comment period be reopened following such additions.

(citations provided *supra* in note 20. Certainly, no data or objective evidence exist in the record to demonstrate the Xact multi-metals CEMS can operate at moisture contents at or above 40 percent. Warchol Aff. at VES 008382.

Footnote 60, cited in paragraph 5, further reflects USEPA's misunderstanding that the Xact technology has been successfully employed by others. In fact, the evidence does not support the Agency's assertion. Region 5 states that the U.S. Department of Defense has purchased three Xact units for use at army munitions incinerators. Statement of Basis at 61, n.60 (VES 009310). In fact, the Army is not using the three Xact units at all, much less for compliance purposes. Warchol Aff. at VES 019308; Fuchs Aff. at VES 007601-007602. USEPA has admitted during meetings with Veolia that no Xact CEMS is currently operating at any commercial hazardous waste incinerator to monitor stack emissions. Warchol Aff. at VES 008382.

In an attempt to bolster the credibility of the failed technology, Region 5 also alleges that Cooper recently signed agreements with the South Coast Air Quality Management District (SCAQMD) and a Texas company that has some type of facility in Nigeria. Statement of Basis at 61.

According to its website, SCAQMD is the air pollution control agency for all of Orange County and the urban portions of Los Angeles, Riverside and San Bernardino counties. USEPA states that "SCAQMD will operate one multi-metals CEMS on a secondary lead smelter in Southern California for a period of at least 10 months beginning in December 2014." Based upon information from the minutes of the March 7, 2014 Board Meeting for SCAQMD, the multi-metals CEMS will be a "demonstration program" which "will allow for a better understanding of the capabilities of this technology in monitoring multi-metals on a continuous basis, and will not be used for compliance purposes." VES 019491. SCAQMD states "[t]his program is necessary to understand and evaluate the capabilities of this technology in monitoring metals emissions on a continuous basis for metal emitting facilities." These actions were taken "[s]ubject to Board adoption of the Proposed Amended Rule 1420.1 multi-metals CEMS demonstration program provision" pursuant to which "large lead-acid battery recycling facilities would be required to fund and participate in a multi-metals CEMS demonstration program that the SCAQMD staff proposes to implement." The CEMS provisions contained within Veolia's draft permit are more arduous then those proposed by SCAQMD. Unlike SCAQMD who acknowledges use of the CEMS is part of a demonstration program to better understand the technology, Region 5 assumes the HWC MACT does not work and disregards the FAP/OPLs monitoring requirements. This is troubling because USEPA is ultimately charged with implementing the CAA through the HWC MACT. However, Region 5 disregards the FAP/OPLs and starts with the presumption that the CEMS technology works and that it accurately calculates multi-metals information for Veolia's emissions. Based on this assumption, USEPA requires Veolia to modify its HWC MACT compliance depending on the values calculated by the CEMS regardless of the accuracy of this technology when applied to Veolia's stacks.

The secondary lead smelter in California was to install the multi-metals CEMS in December 2014. However, Cooper recently represented to Veolia that, to date, the Xact at the Southern California secondary lead smelter facility was not operational. Warchol Aff. at VES 019309. Obviously, even if the Xact was operational, its use in a secondary lead smelter which deals primarily with only a few metals is not comparable to its use in the Veolia incinerators which would involve numerous metals as well as other waste streams.

Region 5 apparently does not know enough about the Nigerian company to reference any particular industry, however nothing suggests the Xact CEMS in Nigeria will be employed to monitor stack emissions or that it will be employed at a commercial hazardous waste incinerator. The location in Nigeria was to install the multi-metals CEMS in mid-summer 2014. Cooper did not provide a status report on whether the Xact was operational in Nigeria. Veolia is unable to comment further on the use of multi-metals CEMS in Nigeria due to a lack of specificity in the Statement of Basis.

5. *Veolia's Comments on §5.3.5, "Performance Specifications for the Multi-Metals CEMS"*

The HWC MACT emissions limitations for mercury, SVMs, and LVMs were established using USEPA Method 29. To demonstrate compliance with these emissions limitations, a source must utilize Method 29 during performance testing *or* use an alternative monitoring technology. 40 C.F.R. §63.1208(b)(2)-(4). The source may only use an alternative monitoring technology if the source provides evidence for its approval and the technology is ultimately approved by the Agency. Veolia has demonstrated compliance using Method 29. Further, Veolia has not petitioned the Agency to use any alternative monitoring technologies and the USEPA has not approved any such technologies for use at Veolia's facility. Thus, Method 29 remains the only approved method for Veolia to demonstrate compliance with the HWC MACT emissions limitations. Region 5 is arbitrarily and capriciously requiring Veolia to use an alternative method that is not approved under the HWC MACT. Further, Region 5 has no authority to require Veolia to use an alternative monitoring technology that Veolia has not requested.

Region 5 has promulgated no performance specifications for the multi-metals CEMS, and therefore the multi-metals CEMS cannot be used to measure compliance. The Statement of Basis states: "As EPA's historical practice indicates, OTM specifications and procedures can be used for compliance purposes with the approval of the permitting authority. As the permitting authority for this permitting action, EPA believes that the specifications and procedures published as OTM 16 and 20 are appropriate for the multi-metals CEMS." Statement of Basis at 61-62. Pursuant to 40 C.F.R. § 63.7(f), an affected facility may petition USEPA to use an alternative test method to any test method specified in a relevant emission standard. However, in this case, the multi-metals CEMS is parametric monitoring and Veolia has not requested it be used at its facility. USEPA does not have authority to sua sponte establish OTM specifications for parametric monitoring that has not been requested by Veolia. Absent such specifications and procedures, the performance of a multi-metals CEMS cannot be evaluated and results produced by a multi-metals CEMS such as the Xact Multi-Metals CEMS cannot be relied upon to accurately measure emissions from an incinerator. Roberson Aff. at VES 008295.

Nevertheless, while acknowledging that performance specifications for multi-metals CEMS have not been subjected to a formal rulemaking process, Region 5 alleges "EPA has published specifications and quality assurance procedures for the multi-metals CEMS" as OTM 16 and OTM 20. Statement of Basis at 61. USEPA has never promulgated or approved these specifications and procedures; rather, the two documents are simply posted on an EPA website entitled "Technology Transfer Network Emission Measurement Center" under "Category C: Other Methods." Both documents have cover pages stamped "DRAFT" and are dated June 2005. More importantly, neither document was authored by USEPA, but rather both were

authored by Cooper, which has a financial interest in portraying the performance specifications as legitimate. The USEPA website contains the following lengthy caveat that governs documents such as these:

> Category C: Other Methods
>
> This category includes test methods which have not yet been subject to the Federal rulemaking process. Each of these methods, as well as the available technical documentation supporting them, have been reviewed by the Emission Measurement Center staff and have been found to be potentially useful to the emission measurement community. The types of technical information reviewed include field and laboratory validation studies; results of collaborative testing; articles from peer-reviewed journals; peer-review comments; and quality assurance (QA) and quality control (QC) procedures in the method itself. A table summarizing the available technical information for each method can be found at the link below. The EPA strongly encourages the submission of additional supporting field and laboratory data as well as comments in regard to these methods.
>
> These methods may be considered for use in Federally enforceable State and local programs (e.g., Title V permits, State Implementation Plans (SIP)) provided they are subject to an EPA Regional SIP approval process or permit veto opportunity and public notice with the opportunity for comment. The methods may also be considered to be candidates to be alternative methods to meet Federal requirements under 40 CFR Parts 60, 61, and 63. However, they must be approved as alternatives under 60.8, 61.13, or 63.7(f) before a source may use them for this purpose. Consideration of a method's applicability for a particular purpose should be based on the stated applicability as well as the supporting technical information outlined in the table. The methods are available for application without EPA oversight for other non-EPA program uses including state permitting programs and scientific and engineering applications.
>
> As many of these methods are submitted by parties outside the Agency, the EPA staff may not necessarily be the technical experts on these methods. Therefore, technical support from EPA for these methods is limited, but the table contains contact information for the developers so that you may contact them directly. Also, be aware that these methods are subject to change based on the review of additional validation studies or on public comment as a part of adoption as a Federal test method, the Title V permitting process, or inclusion in a SIP.

USEPA, Technology Transfer Network, Test Methods at www.epa.gov/ttn/emc/tmethods.html., VES 007561- 007563. Thus, USEPA admits that it may not be "the technical experts on these methods" and that these methods have not been subject to the federal rulemaking process and are subject to change based on additional studies or public comment.

Region 5 has abandoned recognized means of compliance with the HWC MACT in favor of the multi-metals CEMS technology. Unfortunately, in the process, the Agency failed to consider that this technology lacks performance specifications and ongoing quality assurance or quality control procedures for measuring whether the technology was operating correctly and that Pall has now abandoned the technology. Roberson Aff. at VES 008290-008302; Warchol Aff. at VES 008383. Region 5 also failed to consider that it may have been misled, through its exclusive reliance on Cooper/Pall, as to the technology's abilities and its capabilities to function in the environment of Veolia's incinerators. Further, the Agency failed to consider that USEPA demeans its independent status by advocating on behalf of the Xact CEMS and reduces the incentive for technical advancement while also prejudicing Veolia's rights as a consumer. If Veolia's permit were modified as proposed, in theory, Cooper could charge Veolia any price it wishes for the Xact multi-metals CEMS. Roberson Aff. at VES 008290-008302.

F. The Proposed Methodology for Measuring Beryllium Shows that Region 5's Requirement for the Installation of Multi-Metals CEMS Is Arbitrary and Capricious

Region 5 justifies the installation of multi-metals CEMS because it believes the HWC MACT feedstream analysis procedure has problems that were not adequately dealt with by those who promulgated the procedure, specifically:

> [f]eedstream analysis generally poses...uncertainty associated with 1) measurement of extremely low metal concentrations in the feedstream (i.e., concentrations at or near the detection limit of the measurement device); 2) heterogeneity of the hazardous waste, which may lead to a non-representative sample and hence an inaccurate estimate of the metal feed concentration; and 3) inability to demonstrate continuous compliance with MACT limits since there is typically a considerable time lag time between sampling and analysis.

Statement of Basis at 56. Although offering no actual evidence, such as studies of commercial hazardous waste incinerators to support its assertions, Region 5 asserts the CEMS cures the perceived shortcomings of feedstream analysis with one exception—beryllium emissions.

Veolia believes evidence demonstrates that the Cooper multi-metals CEMS will not accurately work to measure multi-metals when used at commercial hazardous waste incinerators. Region 5 agrees with Veolia with respect to beryllium: "EPA recognizes that the only current available multi-metals CEMS that would meet EPA's requirements (i.e the Cooper Environmental Services' multi-metal CEMS) is incapable of measuring beryllium emissions." Statement of Basis at 62. Therefore, Region 5 proposes:

> ...a methodology in the draft permit for quantifying emissions of metals for which the multi-metals CEMS is incapable of directing (sic) measuring. *See* Condition 2.1(D)(1)(i)(ii). The proposed methodology would require that beryllium emissions be quantified using the results of feedstream analysis and the system removal efficiency and exhaust parameters used by Veolia to estimate emissions during the 12-hour period used to calculate the 12-hour average rolling average.

Id. The methodology for beryllium that Region 5 proposes on page 62 of the Statement of Basis is the same HWC MACT methodology that Region 5 dismisses as too uncertain on page 56 of the Statement of Basis. If this accepted HWC MACT methodology is accurate and acceptable for beryllium, Region 5 must show why the same methodology is inaccurate for the other metal emissions in order to justify its decisionmaking regarding CEMS. Rather than treating the emissions monitoring of metals in such an arbitrary fashion, Veolia proposes that **all** metal emissions be subject to measurement using the same methodology—specifically, the methodology set forth and approved in the HWC MACT standard. The HWC MACT standard was established in part to avoid inconsistent and varying sampling results which would occur without this standard methodology.

G. Region 5's Permitting Decision to Use Multi-Metals CEMS is Not Supported by Substantial Evidence

1. *The Xact 640 Multi-Metals CEMS Has Never Been Tested or Installed on Incinerators with Dry Pollution Control Systems such as Those at Veolia*

USEPA makes much of the use of a Xact CEMS at the former Eli Lilly incinerator. Statement of Basis at 60-61. Eli Lilly's incinerator and Veolia's incinerators are not comparable. The Eli Lilly incinerator, along with most other incinerators in the United States, employs wet scrubbers as its pollution control equipment or a combination of wet scrubbers and baghouses. Warchol Aff. at VES 008381. The off gases from incinerators using wet scrubbers all have similar moisture and temperature ranges. In comparison, Veolia operates an exclusively dry pollution control system on Units 2, 3 and 4 of its Sauget facility. Warchol Aff. at VES 008381. The only other exclusively dry system in the United States known to Veolia is the Clean Harbors incinerator in Kimball, Nebraska. Veolia's dry pollution control systems produce off gases at much higher variable moisture and temperature ranges than wet scrubber systems. *Id.* The Xact Multi-Metals CEMS purports to analyze the off gas emitted from an incinerator to determine the amount of metals in the emissions stream. The Xact Multi-Metals CEMS has never been tested, installed or demonstrated to successfully operate in incinerators using exclusively dry pollution control systems and producing off gases with the high variable moisture and high temperature produced by Veolia's incinerators.

2. *Veolia Has Offered Unrefuted Evidence that the Xact 640 Multi-Metals CEMS Will Not Work and Is Inappropriate to be Used as a Temporary Continuous Parametric Monitoring System at Veolia*

Veolia has offered evidence from nationwide experts that the Xact 640 Multi-Metals CEMS is not a CPMS as alleged in the Statement of Basis and will not provide accurate data at Veolia. *See* generally comments of Veolia's Experts (citations provided *supra* note 20).

Michael Fuchs is an expert with over 35 years of experience who actually takes emission measurements from hazardous waste incinerators across the country as part of his job as a Project Manager in the Measurements Group in URS Corporation's Austin, Texas office. He uses CEMS to measure particulates and other constituents. Fuchs Aff. at VES 019283-019293c.

Robert Baxter has for over thirty years worked in hazardous waste incineration across the United States. In recent years through his employment at B3 Systems, Inc., he has become extremely familiar with particulate monitors for EPA MACT compliance and process control.

Currently, multi-metals CEMS are not used anywhere in the United States to measure metals from emissions at a hazardous waste incinerator. Cooper Environmental Services, LLC alleges that the Xact 640 continuous emission monitoring system is capable of measuring metals collected on filter tape through the use of X-ray fluorescence. For purposes of Veolia's Title V permit, Region 5 alleges that these measurements would accurately reflect the metal content of emissions from Veolia's incinerators. However, evidence in the administrative record and Statement of Basis do not support the viability of the Xact 640's use at Veolia's commercial hazardous waste incinerator. Further, the Xact 640 cannot provide accurate data within the Veolia incinerators' environment. *See generally* Fuchs Aff. at VES 019283-019293c; Baxter Aff. at VES 016997-017002.

(i) The Xact 640 as proposed in Veolia's draft Title V Permit is not a temporary Continuous Parametric Monitoring System nor should it be used as evidence of compliance with the HWC MACT

USEPA alleges that the Xact CEMS is being installed as a temporary CPMS to verify the adequacy of the feedrate limits. Statement of Basis at 54. USEPA is not being forthright. USEPA does not treat the Xact CEMS as a temporary CPMS in the 2014 Draft Permit and to suggest that the Xact CEMS is a temporary CPMS without further explanation demonstrates bad faith and improper behavior by the Agency.

As set forth in the regulations, a CEMS limit on an operational incinerator is typically requested by the permittee as part of the CPT testing in order to establish a relationship, if any, between the CEMS and the parameter that is sought to be monitored. *See* 40 C.F.R. §63.1209(g)(1)(iii)(A) and (D) (requiring alternative monitoring requirements such as CEMS to be submitted at the same time as the CPT plan); Baxter Aff. at VES 016997-016998. However, Veolia never requested the CEMS. Further, the first time Region 5 requested installation of the CEMS was as part of the Title V draft permit—well after the CPT testing. The impact to Veolia of the CEMS not being included in the CPT testing is that there is no known relationship between the CEMS and the parameter that is sought to be monitored. Any attempt to establish a relationship between the two must be made during actual, operational conditions which is both disruptive and prejudicial to Veolia.

Further, USEPA alleges the CEMS will be used *temporarily* as a CPMS. Statement of Basis at 53-54. In part due to its temporary nature, a temporary CPMS is never used as evidence of compliance. Only a permanent feedstream analysis plan which was set forth in the CPT plan and whose validity was established through CPT testing establishes HWC MACT compliance. Baxter Aff. at VES 016998. Further, the CPMS is being used as an absolute emission rate for providing evidence of deviations that Region 5 believes will demonstrate that Veolia may not be in compliance with a HWC MACT metals emissions limit. Statement of Basis at 53-55. Thus, the Agency is impermissibly using a multi-metals CEMS as a CPMS, which was never used in Veolia's CPT testing and has no established relationship to compliant emissions, to replace the

HWC MACT recognized feedstream analysis plan which Veolia did use in its CPT testing and is evidence of compliant emissions.[27]

(ii) The Xact 640 has not been demonstrated to be reliable for measuring the content of stack emissions from a commercial hazardous waste incinerator

The Xact 640 has never been evaluated by USEPA approved test methods. The Statement of Basis attempts to obscure this fact with generalizations and unsubstantiated statements.

USEPA's Statement of Basis provides that "multi-metals CEMS ... have been demonstrated to be reliable for measuring metals emissions from a hazardous waste combustor ," and "EPA has monitored side-by-side evaluations of multi-metals CEMS with EPA Method 29." Statement of Basis at 59. USEPA's statements are confusing in that they use terms such as "multi-metals CEMS," "demonstrated," "reliable" and "Method 29." USEPA should in its response to comments accurately state that no multi-metals CEMS used in emission stack gas analysis has ever been demonstrated to be reliable using Method 29, despite the HWC MACT requiring that Method 29 be used to demonstrate compliance with the emission standards for metals. [28]

Similarly, the Statement of Basis also vaguely states "EPA recently evaluated at several facilities a commercial version of a multi-metals CEMS (the Xact multi-metals CEMS)." Statement of Basis at 59. There is no citation given for this evaluation and without further information the statement has no evidentiary value relating to the Xact.

Region 5 should further explain in its response to comments what the Statement of Basis meant that "[m]ulti-metals CEMS ... have been demonstrated to be reliable for measuring metals emissions from a hazardous waste combustor." Statement of Basis at 59. Since the accuracy of the Xact multi-metals CEMS has not been demonstrated against EPA Method 29 with samples collected directly from a source by both the Xact and by EPA Method 29 and since the HWC MACT requires that Method 29 be used to demonstrate compliance with the emission standards for metals, the reliability for measuring metals emissions by the Xact multi-metals CEMS has not been demonstrated for purposes of the HWC MACT.[29]

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[27] The HWC MACT does not provide for or allow a CPMS to be used to "measure" the adequacy of an operating parameter.

[28] The HWC MACT states that Method 29 (40 C.F.R. 60, Appendix A, Method 29) must be used to demonstrate compliance with the emission standards for mercury; the semi volatile metals cadmium and lead; and the low volatility metals arsenic, beryllium and chromium. 40 C.F.R. § 63.1208 (b)(2)-(4).

[29] USEPA's website, under Metals and Mercury Emissions Monitoring, states "[i]n 1996 Performance Specification 10 (PS10) was proposed in conjunction with the original Hazardous Waste Combustor NESHAP, but because the measurement technology had not been fully developed and demonstrated, the specification was not promulgated." USEPA *at* www.epa.gov/ttnemc01/monitor.html. It is important to note that even this proposed technology requires samples be drawn directly from a source if they are to be analyzed. The Xact does not test samples drawn directly from a source. Rather, it draws a sample through an acquisition system and further conditions the sample prior to analyzing it. Fuchs Aff. at VES 019290-019291.

Further, USEPA represents in the Statement of Basis that "Eli Lilly Company received approval from the EPA to use a multi-metals CEMS as an alternative to Method 29 and operating parameter monitoring at the Eli Lilly facility," and that the "US Army has also successfully installed and evaluated a multi-metals CEMS on one of its hazardous waste incinerators." Statement of Basis at 60-61 & n.60. "These studies resulted in several monitoring methods and performance standards for the x-ray technology. These documents may be found on the OAQPS methods website at Other Test Methods. *See* http://www.epa.gov//ttn-emc/prelim.html."[30] Statement of Basis at 61 & n.59.

Cooper prepared the OTMs 16–21, specifically for, and in support of, the Eli Lilly's Alternative Monitoring Petition for the use of the Xact to monitor metals emissions on the hazardous waste incinerator at Eli Lilly's Tippecanoe Laboratories manufacturing facility near Lafayette, Indiana. Fuchs Aff. at VES 019286. At the former Eli Lilly facility, the Xact multi-metals CEMS was primarily to show there were no, to very low, concentrations of metals emissions from Eli Lilly's incinerator. These OTMs were not developed to determine the accuracy of a multi-metals CEMS used in a commercial hazardous waste incinerator to measure the actual and varying concentration of metals. Thus, USEPA is attempting to use these OTMs in a manner in which they were never intended and for a function they were not designed to accomplish.

For emission stack sampling, the OTMs simply do not have the safeguards and essential elements that Method 29 provides to address critical aspects of the measurement of metals emissions from stationary sources through sample acquisition systems. Fuchs Aff. at VES 019288-019290. These omissions create the probability for error when the OTMs are used in lieu of Method 29 to attempt to demonstrate the Xact's reliability:

- Method 29 rigorously requires the sample that is analyzed be collected isokinetically at multiple points across the stack to ensure that a representative sample of the stack gas is collected, including both aerosol and gas-phase constituents. For the results of Method 29, and all isokinetic sampling methods, to be acceptable, the sampling must be within 10% of isokinetic (i.e., 100±10%). If the sampling is not within 10% of the isokinetic sampling rate then that sample cannot be accepted by regulatory agencies. *By comparison*, OTM 16 states in §1.3.2 "your multi-metals CEMS should sample from the source at a flow rate which is within 10 percent of true isokinetic." However, operating data for installed and evaluated Xact CEMS do not report the isokinetic sampling rate. Rather, "[t]he process begins when an isokinetic sub-sample of stack gas is taken from the stilling chamber and drawn through a chemically-reactive filter tape." Statement of

[30] The OTMs listed on EPA's website that pertain to multi-metals CEMS include: Other Test Method 16 (OTM 16) - Specifications for X-Ray Fluorescence Based Multi-Metals CEMS at Stationary Sources; Other Test Method 17 (OTM 17) - Determination of Metal Concentration in CES' Xact CEMS Stilling Chamber Using Filters and Solid Sorbents with X-Ray Fluorescence Analysis; Other Test Method 18 (OTM 18) - Performance Specifications for a Quantitative Reference Aerosol Generator; Other Test Method 19 (OTM 19) - Determination of Metal Concentrations in Emissions from Stationary Sources (Instrumental Analyzer Procedure); Other Test Method 20 (OTM 20) - Quality Assurance Requirements for X-Ray Fluorescence Based Multi-Metals CEMS at Stationary Sources; and Other Test Method 21 (OTM 21) - Standard Operating Procedure for Generating a Quantitative Multi-Metals Reference Aerosol with CES QAG.

Basis at 59. The stilling chamber is a component of the sample acquisition system, and is a vessel into which sample gas is drawn from the source. This should not be confused as withdrawing an isokinetic sample from the source itself as required by Method 29.

- Following collection of the Method 29 sample, the entire sampling train is rinsed (with reagents specified in the method), and all of the components recovered from the sampling train (from the nozzle to the impingers used to collect gas-phase metals) are analyzed for metals in a laboratory (using methods specified in Method 29). Results for Method 29 are specific to individual metals, and include results for all components recovered and analyzed. *By comparison,* while different sample collection configurations are found for applications of the Xact multi-metals CEMS, the sample acquisition systems always include a transport line, and may include a stilling chamber, water trap, and/or drying chamber. None of the components from the sample acquisition system are recovered or analyzed for inclusion in the results for the Xact multi-metals CEMS. This difference between Method 29 and the Xact multi-metals CEMS is potentially critical to the accuracy of the results of the Xact multi-metals CEMS. Specifically for mercury, experience has shown that mercury may condense and then re-vaporize in the sample acquisition system, depending on conditions. This phenomenon could occur for other metals, depending on the configuration and conditions of the sample acquisition system. If experienced, the Xact multi-metals CEMS will not be quantifying a sample representative of the source (i.e., the stack gas) and potentially inaccurate data will be collected.

- Due to the design and operation of the air pollution control systems, the moisture content of stack gases from Veolia's incinerators is variable and considerably higher than most incinerators, typically more than 40% and at times as high as 45%. While Cooper Environmental Services has assured USEPA that the Xact can operate reliably at moisture contents above 30% to 45% (see Statement of Basis footnote 58), no studies supporting Cooper's assurance are cited. Concentration of moisture in the stack gas from Veolia's incinerators could have a negative impact upon the operation of multi-metals CEMS (i.e., its reliability), and the CEMS ability to produce valid metals data in the stack gas from those incinerators. The OTMs were not designed to and do not determine whether the Xact can reliably operate in the conditions presented at Veolia. Further, no evidence exists in the record that the Xact multi-metals CEMS has successfully operated on an incinerator having the concentration of moisture in the stack gas from Veolia's incinerators. Thus, USEPA and Cooper have not demonstrated or proven the Xact is reliable for measuring actual emissions of metals at the stack gas moisture concentrations that would be experienced at Veolia.

Fuchs Aff. at VES 019288-019290. The manner in which the sample is collected and the conditions in the Veolia stacks make it extremely unlikely that results from the Xact 640 will replicate the content of the emissions, if any, from Veolia's stacks.

Published articles by John A. Cooper on the Xact 640 reflect that the Xact 640 has not been compared to emissions taken directly from the stack. For example, the journal article authored by Hay, *et al.* presents the results of relative accuracy testing of the Xact multi-metals CEMS.

K. James Hay, *et al.*, Relative Accuracy Testing of an X-Ray Fluorescence-Based Mercury Monitor at Coal-Fired Boilers, 56 Journal of Air & Waste Management Association, 657-665 (2006). A sample was drawn from the source through a sample acquisition system including a transport line, water trap, and drying chamber. Compressed air was injected into the sample acquisition system upstream of the drying chamber. Following the drying chamber, a portion of the sample gas was drawn into the Xact multi-metals CEMS, and the remainder of the sample gas was collected in paired (i.e. two) Method 29 sampling trains. While relative accuracy (RA) testing of the Xact multi-metals CEMS was performed for the Xact for the sample it analyzed (which had traveled through an acquisition system and has been further conditioned), RA was not demonstrated for samples collected directly from the source (i.e., stack).[31] Fuchs Aff. at VES 019290-019291. Hence, no relative accuracy was proven between the stack emissions and the results provided by the Xact. RA testing performed in this manner measures the RA of the analytical portion of the Xact multi-metals CEMS to Method 29, but it fails to measure the RA between concentrations of metals measurements found in the results of the Xact and the concentrations of metals measurements found in the source (i.e., stack gas). Fuchs Aff. at VES 019290-019291.

(iii) The Xact 640 technology fails to obtain a representative sample

The majority of the metals from the dry process that Veolia uses are in the form of particulate matter ("PM"). As a result of variations during normal operation, the PM emitted is not size selective. Baxter Aff. at VES 016998. In order to provide accurate analysis, the Xact CEMS must obtain a representative sample of the PM in the emission stream and transport that sample to the detector.

PM CEMS systems have PM stratification issues. Baxter Aff. at VES 016998. The velocity profile may normalize, but higher PM concentrations may stay closer to the wall and can be shifted around based on the gas flow dynamics that can vary during normal operation. Further, in Veolia's dry process, the induced draft fan will impact the PM mixing and dispersion in the downstream duct/stack. PM stratification in systems such as Veolia's are part of a dynamic process that varies during normal operations. Dynamic changes in the system (flow, temperature, particle size, particle density, etc.) will change the PM dispersion. Although Veolia uses a baghouse for PM removal, based upon the 2009 and 2013 CPT test data, particle size may vary depending upon operational conditions. *See* Franklin Engineering Group, Inc. Human Health Risk Assessment Report at VES 019340. Dry particles of all sizes may be transferred into the clean-gas side of the baghouse and carried to the stack. Baxter Aff. at VES 016999. Given these conditions, the representativeness of a single point source such as the source the Xact CEMS uses to sample is very questionable. A change in particle size and density can and does affect the accuracy of the results of such single point sampling systems. Baxter Aff. at VES 016999.

[31] Further, RA was measured between the Xact multi-metals CEMS and Method 29 only for mercury and arsenic. Results are not reported for the other metals regulated by the HWC MACT, beryllium, cadmium, chromium, and lead.

PM CEMS and the Xact CEMS sample PM, with the PM CEMS measuring relative total PM and the Xact CEMS purporting to measure PM for selective multi-metal content. USEPA Performance Specification 11 (PS11) defines the procedures for PM CEMS. PS11 uses an EPA Manual Reference Method ("RM") to calibrate the PM CEMS under three (3) levels of PM concentration. This means that if the monitoring location is not ideal, then the data from the traversing RM is used to calibrate the single point sampling CEMS.[32] The RM results compensate for the imperfection in the single point sampling location. Baxter Aff. at VES 016999-017000. Further, a PM CEMS' result is merely a "relative" output (i.e., is there more or less PM) and the result is not a discrete, quantifiable reading (i.e., an absolute numerical value).

The Xact CEMS, on the other hand, purports to measure metals in absolute terms. The result from the Xact CEMS is a discrete, quantifiable reading for each of the multi-metals it tests from a single sampling point. A single point sampling location cannot obtain a sample as representative as a traversing sampling collection system under changing process conditions. When the Xact CEMS fails to obtain a representative sample from the stack to be examined by the detector, the resulting discrete output for each of the multi-metals from the Xact CEMS will be incorrect. Baxter Aff. at VES 017000. Based on the actual sampling location of the Xact CEMS, there is a very high possibility that the Xact CEMS output will not match the actual emissions since, unlike PM CEMS which use PS 11, the Xact CEMS does not have any way of compensating for PM stratification under changing process conditions. Depending on the single point stack gas sampling location of the Xact CEMS, the sample collected could be higher or lower in metals/PM than the overall average concentration.

In addition to problems inherent in a single point sampling system and the Xact's attempt to produce a discrete, quantifiable reading for each of the tested multi-metals, the OTMs for the Xact ignore fundamental sample acquisition procedures typically required in EPA reference methods and therefore, allow numerous opportunities for error in sample transport. The first is obtaining a representative sample from the stack based on a single point sampling system. The second is transporting the stack sample through the large diameter stack probe and umbilical to the stilling chamber.[33] The third is taking a representative isokinetic subsample from the stilling well.[34] The final transport related issue is getting the subsample to the filter tape for analysis.

PM transportation is easiest in a downward, vertical direction due to gravity or in an upward, vertical direction due to the force of the gases working against the gravitational pull. Baxter Aff. at VES 017001. Particle transportation is most difficult for horizontal and inclined runs. USEPA reference methods use sampling probes (i.e., horizontal transport runs). Although the stack gases are being sampled isokinetically (i.e., at the same velocity as the stack flow), based on the nozzle diameter, the actual flow rate in the probe cannot carry the larger particles through the probe and

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[32] Basically, "traversing" is taking samples from multiple locations in the stack and integrating these into one sample.

[33] Krag Peterson, Review of Monitoring Experience with the Xact Multi-Metals CEMS, Cooper Environmental, IT3 2014 Paper & Presentation, Paper 29.

[34] Xact 640 Monitoring System Spec Sheet, Cooper Environmental.

to the filter. This dropping out of the PM is known as "saltation" and accounts for as much as 60% to 80% of the PM ending up in the probe. This is easily seen by reviewing the detailed PM results from the CPT test, Tables 4-14 (VES 017748), 4-15 (VES 017750) & 4-16 (VES 017751) of the CPT Report. This is further supported by detailed analysis of the metals sampling trains in Tables 4-20 (VES 017756), 4-22 (VES 017758) & 4-24 (VES 017761). By reviewing the total metals catch in the probe & nozzle rinse (PNR) to the total, it is apparent that a large portion of the metals show up in the probe, with the exception of mercury. EPA reference methods such as Method 29 require the recovery of the PM/metals from the probe and nozzle for analysis. However, the Xact CEMS OTMs do not require recovery of the multi-metals PM from the probe and umbilical. If the PM does not make it to the filter of the Xact, then that PM will not be analyzed and the Xact CEMS results will be biased low in comparison with the actual stack gases. Conversely, if accumulated PM in the probe nozzle or umbilical breaks free during operation, those PM—potentially carrying metals—would be analyzed by the Xact CEMS giving a biased high result unrelated to current stack conditions. *See supra* Figure 1.4. The dynamic conditions in the stack gases combined with the sample transport issues discussed above are impossible to overcome for a single point sampling system where a large majority of the metals are in the form of PM. This fact would become glaringly obvious if the Xact proposed for Veolia used EPA reference methods such as Method 29 as required by 40 C.F.R. 60, Appendix A.

(iv) The Xact 640 technology has not been calibrated against a QAG that represents the process conditions at Veolia

USEPA states the Xact has been challenged against a QAG:

> Cooper Environmental Services has also developed and received EPA approval for a Quantitative Aerosol Generator (QAG), which generates a reference aerosol for calibrating the multi-metals CEMS and for performing relative accuracy test audits (RATAs) of the multi-metals CEMS. Yanca *et al.* evaluated both the Xact and the QAG using a modified EPA Method 301 at a hazardous waste combustor by comparing measured and reference aerosol concentrations. The authors found that both the Xact and the QAG met the Method 301 validation criteria with precisions and accuracies on the order of 5 percent over a wide range of concentrations.

Statement of Basis at 60. The QAG is an excellent tool to verify the detector, similar to a calibration gas for other CEMS since it generates a known concentration of metal. However, a QAG used to verify a detector is only as good as the QAG's replication of the conditions in which the detector will exist. The QAG used to validate the Xact CEMS was non-representative in that the particle sizes contained within the QAG were too small and not representative of the particle sizes that have been documented to exist in Veolia's stack emissions. Baxter Aff. at VES 017000. During the time that the Xact CEMS was being validated prior to 2010, the QAG being used to validate the Xact could have only produced metal particles in the resulting gas stream that were approximately 1 micron or less. Particles being emitted from incineration processes vary greatly and are not uniformly 1 micron or less.

The data from Veolia's 2013 CPT testing reflected stack velocities across all sampling trains on Units 2, 3 and 4 averaged 31.2 ft/sec, 30.8 ft/sec, and 56.8 ft/sec, respectively. Baxter Aff. at VES 017000. At 30 ft/sec (9.1 m/s), large particles, 100 micron and greater, can be transported up Veolia's stacks based on a review of terminal settling velocities.[35] Baxter Aff. at VES 017000.

Particles of almost any size are denser than their surrounding fluid (air) and therefore have more mass. This extra mass means they do not act like a gas, especially once the particle size starts to be greater than 5–10 microns. Baxter Aff. at VES 017000. Several studies[36] on pneumatic conveying of particles have discovered that that after the particles made a turn, such as transitioning from a horizontal duct to a stack, the particles formed a rope, "horse shoe" or "U" pattern on the opposite side of the vertical wall. This means that the particles on the wall are not in the Centroid (i.e., not in the center of the stack) that the Xact OTMs require for sampling. The sample required by the Xact is therefore not representative of the conditions in the stack. This error is compounded when the Xact takes its sub-sample since it is very probable that larger particles could still be near the wall and therefore the sub-sample would miss them. Further, the particles generated by the pre-2010 QAG were very fine and would be less affected by these conditions. The Xact has simply never been validated using a QAG representative of actual process conditions at Veolia. Baxter Aff. at VES 017000.

(v) The Xact 640 technology is a historical failure when applied to stack emission monitoring at the locations identified by USEPA

In the Statement of Basis, Region 5 discusses at length multi-metals CEMS technology. Statement of Basis 52-63. The Statement of Basis makes much of a handful of attempts to utilize the Xact for stack emission monitoring while obfuscating the truth. The multi-metals technology is a historical failure for daily, operational emissions monitoring and not used anywhere in the country for such stack emissions monitoring.

The Statement of Basis discusses the use of a Xact CEMS approved by USEPA at the request of Eli Lilly for use at the former Eli Lilly incinerator from 2006 to 2010. Statement of Basis at 60-61. Evoniks Degussa Corporation purchased the Tippecanoe facility in 2010. The Xact CEMS failed and is no longer in operation for functional and economic reasons.[37] Fuchs Aff. at VES 007601; Evonik Aff. at VES 007596-007597.

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[35] "Perry's Chemical Engineering Handbook," Fourth Edition, Figure 5-74, Pg 5-62.

[36] "Quantitative Aerosol Generator (QAG) for PM CEMS Calibration," Presentation at EUEC 2014; "Mixing and dispersion of particle ropes in lean phase pneumatic conveying," Harun Bilirgen, Edward K. Levy, Energy Research Center, Lehigh University, 117 ATLSS Drive, Bethlehem, PA 18015, USA; and "Experimental and Numerical Study of Dilute Gas-Solid Flow inside a 90° Horizontal Square Pipe Bend," Walid Aniss Aissa 1, Tarek Abdel Malak Mekhail 1, Soubhi Ali Hassanein, Osama Hamdy, Open Journal of Fluid Dynamics, 2013, 3, 331-339.

[37] The use of the Xact CEMS at the former Eli Lilly incinerator is not relevant to its use at Veolia since the systems at the two facilities are completely different. Baxter Aff. at VES 017001. The incinerator at Eli Lilly used a wet scrubber, not the dry baghouse system utilized by Veolia. As a result, the incinerators at the two facilities produce PM including multi-metal PM that are of a completely different type, size and characteristic. Baxter Aff. at VES 017001. Thus, whether the Xact CEMS worked and produced accurate results at Eli Lilly is not predictive as to whether the Xact CEMS will work and produce accurate results at Veolia.

Similarly, footnote 60 in the Statement of Basis states, "EPA understands that the U.S. Department of Defense has purchased three Xact units for use at army munitions incinerators." Mr. Fuchs contacted Larry Wells with the U.S. Army at the Tooele Army Depot ("TEAD") about these Xact units. Wells related that TEAD had two Xact multi-metals CEMS with one installed on each of the two incinerators at TEAD. Fuchs Aff. at VES 007601. *See also* VES 010411. Of the two incinerators at TEAD, one is on a unit used for testing and the other is used for production. The unit used for testing only operates periodically, while the production unit operates more often. Wells said that while there is a Xact multi-metals CEMS at the test unit, he was not aware that it had ever been operated. Wells then introduced his colleague, Joe Peterson, who is involved in the operation/monitoring of the production furnace at TEAD. Fuchs Aff. at VES 007601. Peterson remembered that the Xact multi-metals CEMS was installed on the production furnace and calibrated when it was acquired (he thought around 2007), and that testing of the production furnace was performed shortly thereafter that allowed comparison of measurements performed by the multi-metals CEMS to an EPA reference method. He remembered that the Xact multi-metals CEMS was operated for about 15 to 20 days before it failed. Peterson said that the Xact multi-metals CEMS has not operated since it failed. Based on the phone conversations with both Wells and Peterson, both of the Xact multi-metals CEMS are still at TEAD, but are not in operation.

The Third Xact multi-metals CEMS referenced at footnote 60 is at the Crane Naval Surface Warfare Center in Crane, Indiana. The instrumental monitoring system has been set up. However, the CEMS is not connected to, or drawing sample gas from, the stack of the unit as part of normal operations and therefore it is not truly installed. Warchol Aff. at VES 019308.

Neither the Eli Lilly incinerator nor the munitions incinerators treat the broad range of wastes treated in a commercial incinerator. Fuchs Aff. at VES 007600; Warchol Aff. at VES 008381-82. Unlike Veolia, the stack emissions from these incinerators also do not have the same high temperature ranges and variable high moisture content. Fuchs Aff. at VES 007600 & VES 019289-019290; Warchol Aff. at VES 008381-008383. The failure of the Xact 640 in these, the only stack emission applications identified by USEPA, does not bode well for success of the Xact 640 in daily operations at Veolia.

(vi) Region 5's actions in requiring the installation of Cooper's Xact 640 CEMS are unprecedented and should be investigated further

Region 5's actions in requiring the installation of Cooper's Xact 640 CEMS are unprecedented. Fuchs Aff. at VES 019292. It is highly unusual for EPA to endorse the use of a specific vendor of an instrument, monitoring equipment, or other such system in a mandated regulatory or enforcement circumstance or for use in lieu of a performance test. Fuchs Aff. at VES 019292; Warchol Aff. at VES 019308; Robertson Aff. at VES 008300-8302. Veolia reserves the right to request additional discovery including written discovery and depositions before an appropriate tribunal due to USEPA's failure to explain this unprecedented requirement that Veolia believes demonstrates a strong showing of bad faith and improper behavior. *See Sierra Club v. Costle*, 657 F.2d 298 (D.C. Cir. 1981).

H. Region 5 Is Arbitrarily and Capriciously Using Unsubstantiated Enforcement Allegations to Deny Veolia a Permit Shield and Support Unnecessary Multi-Metals CEMS and Feedstream Analysis Requirements

Region 5 is improperly using unsubstantiated enforcement allegations to 1) deny Veolia a permit shield and 2) support unlawful and unnecessary multi-metals CEMS and burdensome feedstream analysis requirements. The allegations in the FOVs are unsupported, undeveloped, are not final agency action, and have not been subject to administrative or judicial review. As set forth below, USEPA has acted arbitrarily and capriciously in making these unsupported allegations and by including them in this permitting decision.

1. *The Findings of Violation Issued to Veolia Are Unsubstantiated*

Region 5 sets forth and briefly summarizes (incorrectly) three Findings of Violation ("FOVs") that the Agency has issued to Veolia since approximately 2006. *See* Statement of Basis at 27-28 (VES 009276-009277). These FOVs consist of unsupported, unsubstantiated, and highly contested allegations that should not be used to support the Agency's permitting decision.

Furthermore, references to the FOVs are improper and have no place in the Agency's Statement of Basis because such references transform the permit renewal process into an enforcement action against Veolia. By this transformation, Veolia is deprived of the procedural safeguards it would ordinarily receive had the Agency brought an enforcement action pursuant to the FOVs. The Statement of Basis raises the allegations contained in the FOVs and—since there is no other reason to include the FOVs in the Statement of Basis—*assumes* the allegations contained within the FOVs are true for purpose of the 2014 Draft Permit. Thus, Veolia is being deprived of the procedures that would be available in the enforcement context to contest the allegations contained within the FOVs.

By Region 5's own admission a FOV is of no legal consequence:

> An FOV is simply one step in the EPA's enforcement process. This step is commonly followed by additional investigation or discovery, information gathering, and an exchange of views, all of which occur in the context of an enforcement proceeding, and are important means of fact-finding under our system of civil litigation. An FOV is not a final agency action and is not subject to judicial review. *No binding legal consequences flow from an FOV, and an FOV does not have the force or effect of law.*

Statement of Basis at 29 (emphasis added)(VES 009278). As such, an FOV may consist of nothing more than naked assertions with no factual basis (although it is contemplated that the claims will be developed as the process continues). The FOVs Region 5 has served on Veolia are comprised of misstatements and claims that cannot be substantiated. In meetings with the Agency's legal personnel, Veolia and its counsel have repeatedly requested that the Agency provide Veolia with evidence supporting the Region 5's claims that Veolia violated the emission requirements of the HWC MACT. However, Region 5 has refused to provide any evidence or analysis showing that Veolia has violated the HWC MACT emission standards. Harris Aff. at VES 008390.

Further, the investigation, discovery, and the exchange of views contemplated by USEPA's enforcement process have been totally absent with regard to the FOVs served on Veolia. Despite Veolia's efforts to meet with the Agency, in an effort to understand the claims being made against it, the Agency has totally failed to support or develop the allegations so that Veolia can appropriately answer and/or rebut the Agency's claims. Also, so much time has passed with regard to the allegations contained in the 2006 and 2008 FOVs that the statute of limitations has expired with regard to some or all of those claims. Because of the Agency's failure to develop these FOVs, the claims contained in them are no longer subject to enforcement, have no relevance, and cannot justify the of Veolia's 2014 Draft Permit. This point was reinforced when the DOJ contacted Veolia earlier this year and—after an extended period of reviewing the FOVs and the allegations contained therein—informed Veolia that the Department would not pursuing any enforcement against Veolia. VES 016105.

On the basis of these unsubstantiated FOVs, the Agency seeks to deny Veolia a permit shield for the applicable requirements of the HWC MACT. *See* Statement of Basis 28. Section 504(f) of the 1990 amendments to the CAA explicitly authorizes Title V operating permits to include a "permit shield"—a permit condition providing that, subject to certain restrictions, a source is considered to be in compliance with all applicable requirements if it is in compliance with the terms and conditions of its Title V permit. Under a permit shield, the permit becomes the comprehensive statement of the source's CAA obligations, and such obligations can be enforced only under the permit. For example, if the permitting authority includes emissions limits in a permit because of a requirement in a state implementation plan ("SIP") for reasonably available control technology ("RACT"), only an enforcement action for violating these limits can be brought. No enforcement action can be initiated on the grounds that the SIP actually requires a technology different from that specified as RACT in the permit or that the plan imposes more stringent emission limits. The permit shield must be explicitly written into the permit for the permit shield to apply. USEPA is authorized, if it is the permitting agency, but not required to, include a provision in the permit stating that compliance with the conditions of the permit is considered compliance with any applicable requirements as of the date of the permit issuance. 40 C.F.R § 71.6(f). In the case of Veolia, Region 5 determined that is it not appropriate to grant a permit shield for the applicable requirements of the HWC MACT standard to Veolia:

> However, because the allegations in the June 12, 2008 and August 24, 2012 FOVs have not yet been resolved, and may result in incorporation into the permit of a compliance schedule, if necessary to bring this facility into compliance, EPA has determined that it is not appropriate at this time to grant a permit shield for the applicable requirements of the HWC MACT standard.

See Statement of Basis at 28. In light of the amount of time that has passed, Veolia's efforts to try to resolve the issues, and the lack of engagement by the Agency, this position is unreasonable, arbitrary and capricious, and absurd. USEPA has had multiple opportunities during the many interfaces with Veolia since the FOVs were issued to pursue or at least engage on these topics. However, the Agency has failed to do so. The only fair conclusion one can draw from this pattern of conduct is that Region 5 has no intention of actually pursuing the FOV allegations because it lacks sufficient evidence to bring an enforcement action. Notably, DOJ

declined to pursue an enforcement action earlier this year. Despite this, Region 5 obviously wants to keep the FOVs "alive" for the purposes of pressuring Veolia to accept the enhanced monitoring requirement and multi-metals CEMS included in the Draft Permit. This conduct is improper. The Agency is also being less than truthful when it claims that these FOVs may eventually result in a compliance schedule in the Title V permit. Again, there has been ample time for Region 5 to address the allegations in the FOVs and include a proposed compliance schedule in the Draft permit. However, as §3.2.3 of the Statement of Basis bears out, the Agency has no use for a compliance schedule and instead would rather keep the FOVs as a useful tool to leverage Veolia into accepting unnecessary requirements.

In addition, pursuant to 40 C.F.R. § 70.6(f)(3), a permit shield does not affect "[t]he liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of the permit issuance." Thus, allegations of past violations are not affected by the permit shield. Further, a review of the allegations contained within the 2008 and 2012 FOVs demonstrate that the FOVs are premised on Veolia's alleged conduct and are not premised on conditions present in Veolia's past permit. Therefore, the permit shield which applies only for conditions set out in the permit would be inapplicable to such FOVs. Additionally, even if the FOVs were premised on provisions contained within Veolia's past permit, and USEPA successfully pursues such allegations, a compliance schedule should be unnecessary. Common sense would indicate that USEPA has modified in Veolia's new draft permit any permit conditions it previously found troubling in Veolia's former permit. Any permit shield provided to Veolia now would be premised on Veolia complying with new the draft permit including any new permit conditions that USEPA has placed within it. There is no reason to arbitrarily deny Veolia the permit shield. Veolia's draft permit should become the comprehensive statement of Veolia's CAA obligations including those contained within the HWC MACT, and such obligations should be capable of being enforced only under this new permit. Region 5 should therefore grant Veolia a permit shield for the applicable requirements of HWC MACT standard and those portions of 40 C.F.R. Part 63 applicable to the source as a result of the applicability of 40 C.F.R. Part 63, subpart EEE.

Similarly, USEPA is using the unsupported and unsubstantiated FOVs—particularly the August 24, 2012 FOV—in an attempt to support its push for a multi-metals CEMS and an enhanced FAP. In § 5.2.2. of the Statement of Basis, USEPA sets forth its primary justifications for the enhanced monitoring. Every argument furthered by the Agency in this section relies on the allegations that were included in the August 24, 2012 FOV and the underlying allegations by the NEIC. However, like the 2006 and 2008 FOVs, the 2012 FOV consists of one-sided allegations that have never been tested through an administrative review process, have not been analyzed in the light of Veolia's counter-arguments, and have not been subject to independent third-party review. In light of this, Veolia has set forth below its responses to the allegations contained in the August 24, 2012 FOV.

(i) The August 24, 2012 FOV

The FOV issued to Veolia on August 24, 2012 identified three separate categories of alleged violations: 1) that Veolia failed to provide certain information to Region 5 pursuant to the March 2010 Information Requests; 2) that Veolia failed to establish correct OPLs for mercury based on

the metals testing it conducted in 2008; and 3) that Veolia failed to appropriately analyze certain waste streams prior to incineration. *See* August 2012 FOV at VES 001356-001365.

Each of the alleged violations arises out of long-running points of contention between the Agency and Veolia, but none of the alleged violations supports Region 5's proposal to deny Veolia a proper permit shield.

(a) *Veolia's Alleged Failure to Provide Information Pursuant to the March 2010 Information Requests*

The March 2010 Information Requests issued to Veolia were just one event in a long series of negotiations between Veolia and the Agency regarding metals testing, CEMS, and OPLs for mercury. To understand why the allegations in the August 2012 FOV recklessly misrepresent Veolia's actions and compliance history, it is imperative to understand the sequence of events surrounding the March 2010 Information Requests.

USEPA first served an information request on Veolia regarding metals testing on February 22, 2008 ("February 2008 Information Requests"). The February 2008 Information Requests directed Veolia to perform comprehensive performance testing on all three incineration units by July 15, 2008. *See* February 2008 Information Requests at VES 002450-002452. On March 10, 2008, Veolia submitted a formal written response to the February 2008 Information Requests. *See* Veolia's March 10, 2008 Response at VES 004695-004706. In its response, Veolia agreed to conduct the testing requested by USEPA, but stated that it could not do so by July 15, 2008. Veolia further supported this assertion by attaching an affidavit from Craig Doolittle of ENSR Corporation (Veolia's stack-testing contractor) agreeing that it was not feasible to plan and perform in less than five months testing that would normally take a year or more.

Veolia and the Agency met to discuss the February 2008 Information Requests on March 13, 2008. USEPA acknowledged that the schedule included in the February 2008 Information Requests was unrealistic in light of the time needed to plan, prepare, and perform the CPTs. Veolia agreed to propose an alternative, more practical, schedule and submit it to the USEPA. The schedule Veolia proposed stated that the three testing programs would be completed between August of 2008 and April of 2009. *See* Veolia's March 21, 2008 email (transmitting Veolia's proposed CPT schedules) at VES 004710-004720. However, this alternative schedule was rejected by Region 5.

The next discussion regarding the February 2008 Information Requests took place on April 25, 2008. During a phone call that day between Veolia and Region 5, the Agency instructed Veolia that it had to choose either to complete the metals testing, pursuant to the Agency's very tight time frame, or alternatively to choose one of four options for metals compliance that would be included in Veolia's long-delayed Title V permit. The four options presented to Veolia were: 1) cease incinerating any wastes containing MACT metals; 2) install mercury CEMS; 3) accept OPLs developed by Region 5; or 4) settle previously discussed compliance concerns with issue resolution incorporated into the Title V permit. After negotiations, Veolia—although knowing that conducting performance testing within this expedited time period would be challenging and result in increased costs and, more importantly, increased risk of calculation error as a result of

reduced QA/QC review time—chose, with the agreement of USEPA, to conduct the metals testing instead of one of the four alternatives presented by the Agency.

To memorialize the agreement between the Agency and Veolia regarding the metals testing, the USEPA agreed to revise and reissue the February 2008 Information Requests. Region 5 issued these revised information requests on June 5, 2008 (the same day USEPA issued Veolia's draft Title V permit). *See* June 2008 Information Requests at VES 004721-004733. The June 2008 Information Requests required Veolia to, among other things: commence performance testing for LVMs, SVMs, and mercury by no later than August 15, 2008; submit the results of this testing in a Notification of Compliance ("NOC") by September 26, 2008; and submit an application for significant modification to its Title V permit (to include the OPLs for mercury, SVMs, and LVMs developed by the metals testing in the Title V permit) by September 26, 2008.

Thus, the June 2008 Information Requests were specifically negotiated to address three key issues: 1) the date by which Veolia would provide test data for mercury, SVMs, and LVMs; 2) the development of OPLs for mercury, SVMs, and LVMs using the test data; and 3) the manner in which metals would be handled under the Title V permit (i.e., the Agency required Veolia to submit an application for modification of the permit after it was issued to include OPLs developed from the test data).

Pursuant to the June 2008 Information Requests, Veolia performed the stack testing for LVMs, SVMs, and mercury in August and September of 2008. On September 12, 2008, USEPA formally issued a Title V permit to Veolia. Veolia's final Title V permit did not contain OPLs for LVMs, SVMs, and mercury. On September 16, 2008, at Veolia's request, USEPA issued another revised §114 Information Request extending Veolia's deadline to submit the test data, NOC, and its application for significant modification from September 26, 2008, until October 10, 2008. *See* September 2008 Information Requests at VES 002713-002726. The extension provided Veolia with additional time to add information collected during the September portion of the metals testing.

On October 10, 2008, pursuant to the February, June, and September 2008 Information Requests, Veolia submitted a NOC, the test reports for incinerators 2, 3, and 4, and an application for significant modification to Veolia's Title V permit. *See* Veolia's Oct. 10, 2008 Submission at VES 000743-000917. In its application for significant modification, Veolia, as required by the Agency, submitted revised OPLs for mercury, SVMs, and LVMs. *See* September 2008 Information Requests at VES 002713-002726.

At the direction of USEPA, Veolia submitted a revised application for significant modification to USEPA on or about January 6, 2009. Veolia Jan. 2009 Sig. Mod. at VES 000918- 000922. This revision lowered (i.e., made the OPLs more restrictive) for LVMs, SVMs, and mercury based on a revised calculation for the moisture content of the solid waste that was fed to the incinerator during the August and September 2008 metals testing.

After completing all of the requirements of the negotiated June 2008 Information Requests and submitting a revised application for significant modification in January 2009 at the Agency's direction, Veolia was very surprised when it received another information request from USEPA, dated January 29, 2009 ("January 2009 Information Requests"). Veolia was even more surprised

when it learned that the January 2009 Information Requests directed Veolia to install mercury CEMS on the three hazardous waste incinerators located at the Sauget facility within 30 days of Veolia's receipt of the requests. *See* January 2009 Information Requests at VES 006369-006379. This direction was in clear violation of the April 25, 2008 agreement reached between Veolia and Agency whereby, with the Agency's concurrence, Veolia conducted metals testing in lieu of installing mercury CEMS (or any of the other options offered by the Agency).

After being denied an extension of time to evaluate USEPA's directive to install millions of dollars' worth of monitoring equipment, Veolia responded within the required 30-day deadline provided by the January 2009 Information Requests. Veolia objected to the premise of the information requests—that they were to "determine whether [Veolia] ... is complying with the Hazardous Waste Combustor MACT"—because Veolia had just established compliance with the HWC MACT through USEPA approved and directed performance testing. Veolia Mar. 4 Response at VES 006388-006389. Further, Veolia asserted that if Region 5's intention had always been to require Veolia to install mercury CEMS technology, USEPA should have made Veolia aware in April of 2008 that the Agency was going to require the installation of CEMS technology for metals before Veolia incurred hundreds of thousands of dollars in costs and spent hundreds of hours of staff time completing the metals tests pursuant to the June 2008 Information Requests. *Id.* at VES 006391.

Veolia's response demonstrated that the installation of mercury CEMS was impractical and improper for the purposes of trying to ensure HWC MACT compliance. Specifically, Veolia made the following points, among others, concerning the problems associated with the application of mercury CEMS to its incineration units:

- After diligent inquiry, Veolia did not discover any successful mercury CEMS implementation efforts on any commercial hazardous waste incinerators in the United States. Moreover, the CEMS technology employed in the electric utility industry and on European commercial hazardous waste incinerators is not applicable to, and significantly different than, the CEMS technology that USEPA directed Veolia to install.

- The 30-day period provided by USEPA in the Information Requests for design, selection, purchase, manufacture, and installation of three mercury CEMS, and acquisition and configuration of a Data Acquisition System (DAS) was unreasonable, unachievable, and contrary to good practice. It also was contrary to USEPA's own guidance,[38] and inconsistent with the time period allowed for implementing CEMS programs in numerous other regulations. Moreover, the 30-day time period is not achievable for any single CEMS application, much less three separate mercury monitoring systems.

[38] Center for Environmental Research Information, USEPA, EPA Handbook: Continuous Emission Monitoring Systems for Non-Criteria Pollutants, EPA/625/R-97/001 (April 1997), attached at VES 004160-004329.

- USEPA required the CEMS to be "installed, evaluated, and certified in accordance with the proposed Performance Specification 12"; however, no commercially available mercury CEMS can meet the requirements for either Draft Performance Specification 12 or Performance Specification 12A.

    - USEPA has never officially promulgated Draft Performance Specification 12 and has never subjected the specification to notice and comment rulemaking procedures.

    - Draft Performance Specification 12 contains numerous technical errors (as well as careless typographical errors duplicated in other "draft" performance specifications) and is inappropriate for mercury monitoring applications.

    - Draft PS12 requires the use of National Institutes of Standards and Technology ("NIST") traceable mercury calibration standards for both elemental and oxidized mercury that are not yet available because such traceability protocols are still under development.

    - Draft PS12 mandates the use of NIST traceable standards for oxidized mercury which do not exist at any concentration level.

- The Information Requests lacked any reference to averaging period for reporting data from the CEMS. A CEMS attempting compliance with any emission standard must include both a numerical limit and an associated averaging period.

- The commercially available CEMS that USEPA was forcing Veolia to consider under the Information Requests provides wet basis measurements; however, under 40 C.F.R. Part 63, Subpart EEE, compliance determinations are based on dry basis measurements. USEPA provided no information as to how this conversion would be made.

- The Information Requests referenced citations that do not exist in the Code of Federal Regulations.

Because of these defects and others with the CEMS required by the January 2009 Information Requests, Veolia concluded:

> Veolia believes that the mercury CEMS technology is not a demonstrated compliance monitoring technology for commercial hazardous waste incinerators. Rather, the best method for Veolia and other hazardous waste incinerators to accurately demonstrate compliance with the MACT metals standards is through performance testing and the development of OPLs. This is supported both by the stringent and detailed CPT MACT metals requirements of 40 C.F.R. Part 63, Subpart EEE and USEPA Region 5's own representations to Veolia regarding the use of OPLs over CEMS technology. Specifically, in an April 16, 2008 memorandum directed to Veolia, which was approved by Section Chief William

MacDowell, Region 5 stated the following regarding the use of CEMS for MACT metals:

> Although continuous emission monitors (CEM) for dioxin/furan, mercury, PM, SVM/LVM, and HC1/C12 do exist, the HWC MACT does not require them. EPA has not promulgated a performance specification for HC1/C12 CEMS. A DRE CEM is technically possible, but the case engineer does not know of any facility that uses one. **Until EPA requires a CEM for each standard, we will have to rely upon OPLs as surrogates for them. In order for OPLs to assure compliance reliably, the owner or operator must establish OPLs from CPT operating data on the same incinerator, under known test operating conditions.**

Veolia Mar. 4, 2009 Response at VES 006393 (quoting USEPA April 16, 2008 Memo). After Veolia submitted its detailed response on March 4, 2009, USEPA and Veolia met to discuss the January 2009 Information Requests on May 13, 2009. At the May 13, 2009, meeting, USEPA conceded that 30 days had been an insufficient period of time to install the CEMS contemplated by the January 2009 Information Requests. Moreover, the Agency acknowledged that NIST had yet to come up with a traceable calibration standard that could begin to verify the accuracy of data produced by the proposed mercury CEMS. USEPA also conceded that they referenced the wrong Performance Specification—Draft PS12—in their information requests and that, to their knowledge, no mercury CEMS had yet been installed and successfully operated at a commercial hazardous waste combustion facility in the United States. Despite these errors and admissions, USEPA indicated that it would not withdraw the January 2009 Information Requests and maintained that the Agency intended to use the data collected via the CEMS for compliance with the HWC MACT and possible enforcement. However, the Agency did indicate that it wished to continue the dialogue with Veolia and ended the meeting by stating that Agency personnel would contact Veolia for further discussions—with the eventual goal being some sort of settlement regarding compliance. *See* Harris Aff. at VES 008388.

However, instead of a discussion regarding settlement, the next meaningful contact that Veolia received from the Agency were the March 2010 Information Requests. USEPA sent the March 2010 Information Requests to Veolia without explanation or prior notification. The March 2010 Information Requests consisted of a slightly revised version of USEPA's flawed January 2009 Information Requests with a few material changes to the relevant requests. The primary material change in the March 2010 Information Request was that USEPA attempted to fix the deficiencies that plagued the January 2009 version by impermissibly shifting from itself to Veolia the burden of creating technical standards to verify the data generated by the mercury CEMS that USEPA itself had failed to devise. (A strikethrough comparison of the January 2009 and March 2010 Information Requests is attached at VES 006420-006438.)

Veolia responded to the March 2010 Information Requests on March 25, 2010. *See* Veolia's March 25, 2010 Response at VES 006346-006468. In addition to numerous general objections, Veolia objected to the Information Requests on the grounds that (a) they were unconstitutional as they placed Veolia in a position of incurring penalties for noncompliance without any

opportunity for administrative or judicial review; (b) they represented an attempt by the Agency to unlawfully modify Veolia's Title V permit; (c) they represented an attempt by the Agency to deprive Veolia of its due process rights by circumventing Veolia's appeal of its RCRA Part B Permit; and (d) they were arbitrary and capricious and lacked a rational basis because they ignored Veolia's demonstrated compliance with the HWC MACT Rule. However, despite these objections, Veolia again offered to meet with the Agency in an attempt to work out a compromise.

On April 28, 2010, Veolia sent a team of decision makers to meet with USEPA at USEPA's Raleigh, North Carolina Research Triangle Park facility. At these meetings, the Agency was unable to identify a location where mercury CEMS technology had ever been successfully utilized in the United States on a commercial hazardous waste incinerator. Veolia expressed its belief, based upon Veolia's experience in operating its commercial hazardous waste incinerators, that the high variable moisture, high temperature environment found in the incinerators and the wide variations of mercury found in the feed combined to make the Veolia incinerators the most challenging environment in which anyone had ever proposed to operate a mercury CEMS. Veolia believed that the technology was likely to fail and would succeed, if ever, only after the mercury CEMS endured many failures and Veolia incurred much time and expense attempting to force the technology to successfully operate. The Agency did not disagree and offered no evidence to the contrary. As a result of the discussions, the Agency offered to entertain alternative methods to obtain the relevant emissions information. Harris Aff. at VES 008388.

In response to USEPA's invitation to offer alternative methods as part of the ongoing discussions between the parties, on May 25, 2010, Veolia offered, in relevant part, to install additional technology in the form of activated carbon injection systems on incinerators 2 and 3, provided that all approvals were in place. Carbon injection systems ***actually reduce emissions*** as opposed to simply monitoring emissions. *See* Veolia's May 25, 2010 Letter at VES 006469-006471. Veolia further proposed that it would provide the Agency with additional data by scheduling and performing mercury emission testing in accordance with the USEPA approved 2008 performance test plans. This testing would document whether incinerator units 2, 3 and 4 met all applicable mercury MACT Standards. Despite its offer to entertain alternatives to the March 2010, Information Request, the Agency never provided an analysis or otherwise responded to the merits of this proposal.

In fact, USEPA did not bring up the March 2010 Information Requests—or mention CEMS at all—until Veolia received the August 2012 FOV. The August 2012 FOV states, without explanation, "[t]o date, Veolia has failed to provide any of the information required by the March 10, 2010 Information Request in violation of §114 of the CAA." August 2012 FOV at VES 001364. Quite conversely, as set forth in these comments and in Mr. Harris' Affidavit, it was ***USEPA*** that never provided any response to Veolia's March 4, 2009, response to the January 2009 Information Requests, Veolia's March 25, 2010 response to the March 2010 Information Requests, or Veolia's May 25, 2010 offer to install carbon injection systems as a way to resolve the CEMS issues. *See* Harris Aff. at VES 008387-008388.

Throughout this entire period, despite its repeated requests, Veolia has been presented with no evidence demonstrating Veolia's noncompliance with the HWC MACT emission standards as set forth in the August 2012 FOV. Moreover, given this history, USEPA's demand that Veolia

install mercury CEMS as set forth in the March 2010 Information Requests—an expensive, experimental technology that cannot be used to establish MACT compliance—has no rational basis and is arbitrary and capricious.

(b) *Allegation that Veolia Failed to Establish and Abide by Appropriate OPLs for Mercury Emissions*

As detailed above, Veolia and USEPA have communicated extensively from 2008 forward concerning Veolia's emissions. Throughout this period, Veolia worked cooperatively with USEPA in an effort to establish appropriate OPLs. In August and September of 2008, Veolia undertook performance testing to establish OPLs for mercury, SVMs, and LVMs as detailed in the June 2008 Information Requests. Prior to conducting the tests, Veolia provided USEPA with Veolia's Metals Performance Test Plan, which set forth how the testing would be performed and how the waste would be spiked with mercury prior to being fed into the incinerator. *See* VES 002633-002707. Further, during the August 2008 performance testing, Veolia provided split samples to USEPA's Region 5 Land Group at USEPA's request. As reflected in the plan provided to USEPA, Veolia retained ENSR Corporation (which is now a part of AECOM, Inc.) to perform the stack testing. ENSR retained the services of the outside lab Maxxam Analytics, Inc. to evaluate and analyze the collected samples on behalf of Veolia. Maxxam in turn sub-contracted the analysis to PSC Environmental Systems to perform ash and heating value analyses of the waste samples.

The accepted analytical method for the metals analyses of the solid waste samples from the tests was that the testing was to be performed on the samples on an "as received" basis. Maxxam followed a procedure, common for soil samples, that included a step that dried the samples prior to analyzing for metals content. This most likely inflated the reported metals concentrations. It was presumed that the metals analysis reported by the lab were on an "as received" basis since the lab reports did not indicate otherwise (as is typically done when analyses are performed on a dry basis). The fact that the samples were first dried before analyses were performed was discovered in early November of 2008. Maxxam was instructed to repeat their drying procedure, following the same protocol as was originally performed, on the remaining solid waste samples for Units 2 and 3 (no samples remained from Unit 4 testing) and record before and after weights so a moisture percentage could be determined. After these moisture determinations were received, mercury feed rates for the testing were recalculated and Veolia lowered the mercury feedrate limit set forth in its DOC from 0.0047 lb/hr to 0.0034 lb/hr on Units 2 and 3 on November 18, 2008. *See* VES 007582-007589. Since Maxxam did not have any Unit 4 solid waste samples remaining, it was determined that the most conservative, and only known, moisture values for the Unit 4 solid samples (from PSC analytical results) would be used to recalculate the mercury feedrates for the testing on Unit 4. Upon completing this calculation, Veolia lowered Unit 4's mercury feedrate limit set forth in its DOC from 0.031 lb/hr to 0.026 lb/hr on November 25, 2008. *See* VES 007590-7595. Veolia promptly notified USEPA personnel of the new calculations and the reasons for the new calculations. It should be noted that Veolia believes that USEPA's insistence that the 2008 metals testing be conducted on an expedited basis—in a shorter timeframe than provided for in the HWC MACT—significantly contributed to the moisture issue not being discovered until November 2008. In fact, if Veolia had been provided with three months to prepare the test reports as provided under the

regulations, this issue would have been identified and corrected within the three month period, since it was corrected in November of 2008.

On or about July 28, 2009, USEPA's Land and Air Groups initiated a call with Veolia staff. During this call, USEPA expressed satisfaction with the preparation of the spiked sample for mercury but continued to express concern with the moisture content of the solid samples. This was part of an ongoing discussion with USEPA in which USEPA alleged on a number of occasions that analysis the Agency had conducted on the 2008 split samples—specifically with regard to moisture content—was inconsistent with Veolia's analysis even after Veolia had adjusted the OPLs in November of 2008. During these discussions, Veolia repeatedly offered to use USEPA's moisture content or, in the alternative, use the most conservative moisture content to develop new OPLs. *See* Veolia's July 6, 2009 Response at VES 004833-004841. USEPA continually rebuffed these attempts to settle the dispute by refusing to provide Veolia with the moisture content USEPA allegedly found via analysis of its own split samples. Harris Aff. at VES 008387.

In an effort to resolve the dispute with USEPA, but without the benefit of USEPA's analytical data from the split samples, Veolia searched for a logical nexus for an even more conservative moisture value. Veolia determined that PSC's analytical methods resulted in an even more conservative moisture value then Maxxam's (due to drying temperature) and therefore used PSC's moisture results to establish even lower OPLs. These revised OPLs were placed in Veolia's NOC on March 16, 2010, for Units 2 and 3. Veolia used PSC's moisture results not because Veolia believed them to be more accurate, rather simply as an accommodation to USEPA and in an effort to bring final resolution to the moisture issue. During a meeting in Springfield, Illinois on March of 2011, USEPA representatives finally agreed that the moisture issue was resolved.

It is important to note that from March 10, 2008, to the present, Veolia has followed USEPA's specific directive that Veolia comply with the October 10, 2008, OPLs. *See* USEPA's December 5, 2008 Letter at VES 007553-007560. Further, during this time period, Veolia never exceeded its mercury emission standard of 130 ug/dscm based on its actual feedrate.

(c) *Allegation that Veolia Failed to Appropriately Analyze Certain Waste Streams*

The 2012 FOV alleged that Veolia failed to appropriately profile and analyze certain wastes it receives for incineration. The allegations arose out of an inspection conducted at the Veolia facility by the USEPA's National Enforcement Investigations Center ("NEIC") between December 5, 2011, and December 15, 2011. The August 2012 FOV contained excerpts from the NEIC's final report regarding the inspection; however, Region 5 did not provide Veolia with a copy of the NEIC report prior to issuing the August 2012 FOV. The excerpts of the NEIC report that were included contained errors, moreover, because the report was excerpted, the totality of the NEIC's findings with regard to Veolia were unclear—i.e., it was unclear whether the NEIC had generally found Veolia to be in compliance and had only found a small number of minor issues, or whether the NEIC had determined there were larger compliance issues.

In response to the August 2012 FOV, Veolia scheduled a meeting with USEPA on September 18, 2012. On September 17, 2012, the day before the scheduled meeting on the August 2012 FOV, Region 5 sent Veolia a Notice of Violation ("NOV"), dated September 13, 2012. Sept. 2012 NOV at VES 006478-006481. The September 2012 NOV contained the same allegations based on the NEIC inspection that were contained in the August 2012 FOV. In addition, although it contained nearly identical allegations, the September 2012 NOV was sent by the RCRA Branch of Region 5.

Veolia representatives met with USEPA on September 18, 2012, in Chicago to discuss both the FOV and the NOV. During the meeting, Veolia informed USEPA that it could not properly respond to the violations alleged in the FOV and the NOV without receiving a copy of the NEIC Report, which, at the time of the meeting, Veolia had requested but had not received. In addition, based on the information set forth in FOV and the NOV, Veolia stated that the NEIC Report appeared to contain errors. Region 5's assistant regional counsel, Sabrina Argentieri, requested that Veolia set forth in writing the allegations that Veolia believed to be erroneous to the extent Veolia could do so without having the benefit of having reviewed the NEIC Report. On September 26, 2012, Veolia provided Ms. Argentieri with the requested written analysis.

Veolia finally received a copy of the NEIC report on September 28, 2012. The NEIC report stated that the specific purpose of the investigation was to determine Veolia's compliance with 40 C.F.R. Part 63.1209(c) (analysis of feedstreams) under the Clean Air Act and Veolia's compliance with its Waste Analysis Plan ("WAP") under RCRA. *See* NEIC Report at VES 001330. The NEIC report did not offer conclusions or compliance/enforcement recommendations; rather, the report set forth four "observations/areas of concern" regarding Veolia's waste profiles. These "observations/areas of concern" eventually ended up in the FOV and NOV served on Veolia. After having reviewed the NEIC Report, Veolia confirmed that the NEIC Report contained errors. Veolia provided a written response to the allegations via letter dated October 12, 2012. (A copy of Veolia's October 12, 2012 response is attached as VES 006483-006502.) Veolia responded to Region 5's general allegations voicing concerns over Veolia's waste profiles as follows

> Since the effective date of the Incinerator MACT Rule, Veolia has had a Metals Testing Protocol in place that has been provided to USEPA, along with a Waste Analysis Plan (WAP) and Feed Stream Analysis Plan (FAP). This protocol along with the WAP and FAP determines if metals analysis needs to be conducted and how often based on the generator's provided waste profile sheet including metal analysis, MSDSs, and additional generator-provided information. The facility's on-site laboratory is equipped with two Inductively Coupled Plasma ("ICP") units and two direct mercury analyzers ("DMA") that support this effort. [Currently, Veolia operates three ICPs and 4 DMAs.] These instruments are continually upgraded to keep up with improved technology/software. These protocols and plans, along with the on-site laboratory's capabilities, ensure that the wastes being received are properly evaluated and the metal concentrations are correctly determined. In addition, Veolia has a metals suspect list that is continually updated and that requires those suspect wastes to undergo metals analysis.

In addition, Veolia responded to each of USEPA's individual allegations as follows:

USEPA Allegation No. 1: *Veolia was using toxicity characteristic leaching procedure (TCLP) results instead of total metals concentrations. NEIC identified the presence of conflicting metals data between the profile package and the information in the WTS and in the incineration control system (ICS). For profile 236152, an MSDS contained in the profile package listed the chromium concentration as "3 to 6 percent chromium as chromium oxide" (30,000 to 60,000 mg/kg). TCLP values from off-site analytical (SGS Environmental Services, Inc. on 3/24/06) were 11.4 mg/L for Chromium and 0.876 mg/L for Cadmium. Veolia stated that 20 times TCLP values were used (228 and 17.52 mg/L) for the incinerator feed rate calculations, although there are no values in the WTS query that were provided.*

Veolia Response No. 1: Profile 236152 is rarely used and has only shipped on four occasions since April of 2006. This waste stream is comprised of spent filter media (carbon with chrome). The MSDS in the profile package is for unused carbon with copper and chromium and is provided as additional information, not to establish a metals concentration for the waste. As a result, the concentration value defined on the MSDS would not be in the WTS or ICS. Following discussions with NEIC, currently this spent filter media waste stream is sampled and analyzed for metals every time it is received. Finally, after reviewing the NEIC inspection report, it does not reflect accurately Veolia's procedures for managing the total metals concentrations in the WTS and ICS. The profile package may contain additional information (from MSDSs) that is not representative of the actual waste stream. In this case, the MSDS in the profile package was unused carbon with copper and chromium, where the actual waste stream was spent filter media (carbon with chrome). The 228 mg/l for chromium was consistently used in the profile package and in the WTS and ICS. If the NEIC continues to have concerns, Veolia will need additional information from the NEIC in order to address the NEIC's concerns, if any.

USEPA Allegation No. 2: *The profile package for 691163 has a TCLP value for chromium of 1.8 mg/L, while the WTS and ICS used a value of 0 mg/L. Chromium is likely much greater than 20 times the TCLP concentration of 1.8 mg/L, an off-site analysis result that was found in the profile package. No on-site metal analyses has been conducted.*

Veolia Response No. 2: Veolia reviewed this profile and determined that it did not take the TCLP data and multiple by 20 to obtain the metals concentration. This waste stream is not a metals suspect waste so in accordance with Veolia protocols, metals analysis is not required. The TCLP values included in this waste profile were all below detection limits. Moreover, the 1.8 mg/L value referenced in both paragraph 45(b) of the First Letter and paragraph 2 of the Second Letter was not included in this profile.

If the NEIC continues to have a concern, Veolia needs additional information from the NEIC in order to address the NEIC's concern, if any.

USEPA Allegation No. 3: *Veolia profile reviews were based on general processes that did not consider the possibility for variability in volatile or semivolatile metals concentrations. For example, profiles 660210 and CI5789 both are described as "cyanide containing wastes." While both profiles list cadmium cyanide as a possible constituent, Veolia uses a value of 6,470 mg/kg cadmium for profile CI5789 and 1 mg/kg cadmium for profile 660210. These are very similar waste streams generated by different generators, therefore there could be variability between waste streams.*

Veolia Response No. 3: These are not "very similar waste streams"; rather, CI5789 is bulk liquid waste that comes to Veolia in 5,000 gallon shipments and 660210 consists of containers filled with individually-packaged and labeled unused products. The cadmium cyanide concentration for CI5789 is based on analytical analysis, while the concentration present in 660210 is known because it is unused material (and was confirmed through analysis). Veolia believes this further explanation adequately addresses NEIC's issues. If the NEIC continues to have concerns, Veolia will need additional information from the NEIC in order to address the NEIC's concerns, if any.

USEPA Allegation No. 4: *The profile package for AF3753 has a total mercury value of 4140 mg/kg (TCLP value of 37.8 mg/L), but the WTS and ICS used a value of 25 mg/kg for at least 5 years. Having conflicting values between profile packages and databases, without a clear indication as to which value is correct, could lead to the use of incorrect metals concentrations for feed rate calculations. Veolia stated that a total mercury analysis was measured and the measured value of 25 ppm is used for the incinerator feed rate calculations, rather than the profile values stored in the WTS. Since the historical data in the profile indicates a mercury value as high as 4140 mg/kg, this waste stream might not have a total mercury value of 25 ppm every shipment.*

Veolia Response No. 4: The 4140 mg/kg value is a historical value that dates back to the early 1990s. In 2004, when the MACT standards came into effect, the analysis for profile package AF3753 was updated and the updated analysis showed mercury to be below 25 mg/kg. Therefore, Veolia used a value of 25 mg/kg for the incinerator feed rate calculations. Recently, the generator validated Veolia's use of the 25 mg/kg mercury figure when the generator amended profile AF3753 to list 0-50 mg/kg thimerosal. Thimerosal is 49.55% mercury. Given that the upper limit of profile AF3753 is 50 mg/kg thimerosal, the upper limit of profile AF3753 for mercury is 49.55% of 50 mg/kg or 24.78 mg/kg. Pursuant to applicable regulations, Veolia has the right to rely upon the generator's representations. Further, the generator's representations are in agreement with Veolia's own analysis. Finally, after

reviewing the NEIC inspection report, it does not reflect accurately Veolia's procedures for managing the total metals concentrations in the WTS and ICS. The profile package matched the WTS and ICS. If the NEIC continues to have concerns, Veolia will need additional information from the NEIC in order to address the NEIC's concerns, if any.

USEPA Allegation No. 5: *For Profile 374339, Veolia stated that a total metals analyses was run on-site and total MACT metals were used for IPS/WTS. Since the waste type listed on this profile is "Organic Debris," this waste stream is variable and should be analyzed each time a load is received.*

Veolia Response No. 5: While not to the exclusion of its own sampling and analysis, Veolia has the right to rely upon the generator's representations relating to the waste stream under applicable regulations. However, Veolia is sampling and analyzing this waste stream for metals every time it is received and the metals concentrations are adjusted as such in the WTS and ICS based on that current analysis.

Veolia's Oct. 12, 2012 Response at VES 006483-006502. As Veolia's responses indicate, the waste analysis allegations contained in the FOV and NOV were either based on misunderstandings of Veolia's waste profiles and waste profile system, or were just erroneous. Moreover, Veolia, although it was not required to do so, instituted a program to test many of the incoming wastes streams identified in the NEIC report for metals every time those wastes are received at the facility. Region 5 failed to provide any response, comment, or reaction to Veolia's October 12, 2012, response.

In sum, each and every allegation contained in the August 2012 FOV has been resolved, rebutted, clarified, or otherwise addressed by Veolia during the negotiations with the Agency over Veolia's HWC MACT compliance that have taken place over the last several years. Moreover, despite the time, effort, and resources Veolia has spent to engage USEPA regarding the issues raised in the August 2012 FOV, the Agency has offered no response and provided no other support for its allegations. The Agency has taken no final action—nor taken steps toward final agency action—that show that Veolia is out of compliance. For these reasons, Region 5 must revise the Statement of Basis and the draft permit to include a permit shield to Veolia for the HWC MACT and remove all references to the FOVs. Thereafter, Region 5 should reopen this portion of the permit for public comment.

2. *Alleged Referrals by the IEPA to the Illinois Attorney General*

On Page 28, footnote 15, of the Statement of Basis, USEPA sets forth the following:

> [15]On February 26, 2007, IEPA referred Veolia to the Illinois Attorney General for alleged violations of the Illinois Environmental Protection Act, Illinois Pollution Control Board Regulations, and the HWC MACT. On March 5, 2010, after receiving additional information, the IEPA referred to the Illinois Attorney

General additional alleged violations of the Illinois Environmental Protection Act, Illinois Pollution Control Board Regulations, and the HWC MACT.

Statement of Basis at 28 n.15 at VES 009277. Veolia has never received any notice of any kind regarding these alleged violations referred to the Illinois Attorney General by IEPA. Nor has the Illinois Attorney General, to Veolia's knowledge, ever pursued such allegations in any way. Moreover, the passage of time since these alleged referrals were supposedly made (more than seven years and four years, respectively) strongly suggests that, even if these referrals were made, the Illinois Attorney General long ago deemed them unworthy. Region 5's inclusion of this footnote in the Statement of Basis is improper and negligent, and demonstrates the Agency's bias and malice against Veolia in requiring the multi-metals CEMS and the changes to the FAP in the 2014 Draft Permit. These unspecified and unsubstantiated allegations provide no support for any of the Agency's permitting actions with regard to Veolia.

All references to the 2006, 2008, and 2012 FOVs and any reference to alleged violations referred to the Illinois Attorney General by IEPA should be removed from the Statement of Basis. It would be arbitrary and capricious for Region 5 to rely on unsupported, unsubstantiated, and unidentified enforcement allegations to support the Agency's denial of Veolia's permit shield and the enhanced monitoring requirements. Further, the permit shield for the HWC MACT should be granted and the enhanced FAP and the requirements for the installation of CEMS should be removed from the 2014 Draft Permit.

I. The Administrative Procedures USEPA Is Employing Violate Veolia's Due Process Rights

The administrative procedures USEPA is following for the permit renewal are constitutionally inadequate *as applied* to Veolia because they do not give Veolia an adequate opportunity to contest the alleged violations of the Clean Air Act that Region 5 is using to justify portions of the 2014 Draft Permit.

Veolia is not a manufacturing facility. It does not make commercial or industrial products. Rather, Veolia's sole business is to destroy hazardous waste in a safe and effective manner by incinerating that waste. The incineration process does not create products; it creates air emissions. Under § 502 of the CAA, Veolia cannot operate its incinerators and create air emissions without a valid permit. *See* 42 U.S.C. § 7661a. In addition, while the Clean Air Act contemplates that sources required to have permits may be permitted by state-regulatory agencies with delegated programs—like IEPA—USEPA has taken over the Title V permit process as it relates to Veolia. Veolia cannot obtain a Title V permit from any other authority other than USEPA. Thus, USEPA holds a unique and powerful authority over Veolia's sole business activity.

As set forth herein, USEPA has subjected Veolia to a barrage of enforcement actions beginning with the issuance of the 2006 FOV and continuing with a half-dozen §114 information requests, and the 2008 and 2012 FOVs. In each instance, Region 5 alleged significant violations of the CAA or asserted that violations formed the basis of the Agency's requests for information. However, also in each instance, Region 5 provided little or no factual support for its assertions

and failed to substantively respond to Veolia's submission of information in response to the Agency's accusations. In addition, Region 5 has carried on this process in a manner that ensured Veolia could not seek judicial review.

The unsupported nature of its accusations notwithstanding, Region 5 is now using its Title V authority over Veolia to continue its pursuit of Veolia. The Agency's actions are an unlawful and an inappropriate use of the Title V program that has resulted in the violation of Veolia's due process rights. The permit conditions that USEPA imposes in this draft permit gravely threaten Veolia's property rights and Veolia's ability to carry on its business. Under the guarantees of the Fifth Amendment to the United States Constitution, USEPA cannot take these actions and deprive Veolia of its protected interests "without due process of law." U.S. Const. amend. 5.

The procedures for processing a Title V permit renewal are included in 40 C.F.R. §71.7(a) and Subsection 71.11 and mirror those associated with the familiar "notice and comment rulemaking" under § 553 of the Administrative Procedure Act. *See* 5 U.S.C § 553. While these procedures offer sufficient due process protection in most instances, they are inadequate *as applied* to Veolia under the circumstances of the 2014 Draft Permit.

The § 553 procedures are designed to ensure public participation in the Agency's decisionmaking and they offer protection at a level consummate with participation by any member of the general public. However, they are inadequate as applied to Veolia when the Agency is basing its permit decision on specific, unsubstantiated allegations regarding Veolia's compliance history. While Veolia has participated in the process through these comments and the public hearing, it has no opportunity under these procedures to engage in fact-finding or other discovery regarding the allegations being made against it. Veolia also has had no opportunity to conduct cross-examination or otherwise to test the evidence against it in the presence of a neutral fact-finder. Finally, although the procedures in 40 C.F.R. § 71.11 and § 307(b) of the CAA contemplate an appeal to the appropriate United States Court of Appeals after USEPA makes its permitting decision (and appeals to the EAB are exhausted), this level of post-deprivation review will not provide Veolia with the fact-finding and cross-examination that is essential to due process in this instance.

J. Specific Section-by-Section Comments

1. *Region 5's Statement of Basis Contains Errors and Inaccuracies*

Page 15 of 79, § 2.1, Table 2

The capacity of Storage Tanks for Liquid Wastes Tank #2 is 4931 gallons, not 4391 gallons as set forth in the Table.

Page 20 of 79, § 2.2, Table 4

The facility has only one horizontal 550 gallon #2 fuel oil tank, not two as set forth in the table.

Page 27 of 79, § 3.1.2.C., Paragraph 3

Region 5 suggests that it became aware of Veolia's intention to conduct CPTs in April of 2013 and, based on that information, it decided to abandon the reopening. However, Region 5 has misstated the facts with regard to when Veolia made the Region aware that Veolia was going to conduct another round of CPTs. Veolia's Title V permit expired on October 12, 2013, however USEPA notified Veolia in June of 2012 that the CPT was required to be initiated by September 5, 2013. Although Veolia disagreed with this date because the 5 year requirement for CPT testing would not have required Veolia to conduct testing until September 5, 2014, Veolia submitted CPT plans to USEPA on **September 5, 2012**. This is well before the permit expired on October 12, 2013, and months before the April 2013 date that Region 5 suggests. Because of this, Region 5's claim that Veolia's CPT testing was the reason for abandoning the reopening process is dubious. Region 5 should revise this paragraph and state the real reasons that it abandoned the permit reopening, to the extent it has actual reasons.

Page 27 of 79, § 3.2 & 3.2.2

The Agency has never taken any final agency action pertaining to the allegations contained within the September 27, 2006 FOV/NOV and the June 12, 2008 FOV/NOV. So much time has passed with regard to the allegations contained in the 2006 and 2008 FOVs, that the statute of limitations has expired with regard to some or all of those claims. Because of the Agency's failure to develop these FOVs, the claims contained in them are no longer subject to enforcement, have no relevance, and should be deleted from the Statement of Basis. Moreover, it is improper for Region 5 to deny Veolia a comprehensive permit shield on the basis of the unsubstantiated and unproven FOVs. The Statement of Basis and the 2014 Draft Permit should be revised to give Veolia a permit shield for the applicable provisions of the HWC MACT. *See supra* Part IV.H.

Page 28 of 79, Footnote 15

There is no evidence of any enforcement referrals in the administrative record and this footnote is potentially misleading and prejudicial to Veolia and should be deleted from the Statement of Basis it its entirety.

Page 47 of 79, § 5.2.1, First Partial Paragraph

The following statement is incorrect, misleading, and potentially prejudicial to Veolia and should be removed from the Statement of Basis: "Therefore, under the HWC MACT, Veolia must analyze each feedstream *prior to* feeding the material into any of its incinerators and document the amount of metals, ash and chlorine present in the feedstream."

The HWC MACT does not require each feedstream to be analyzed. In fact, the two other commercial incinerators in Region 5 do not analyze each feedstream prior to feeding the material into their incinerators. *See* Ross Incineration Services, Inc., Waste Characteristics and Waste Analysis Plan (April 2013) at VES 016106-016293 & Heritage-WTI, Inc., Waste Characteristics and Waste Analysis Plan (Sept. 18, 2014) at VES 016295-016537. Furthermore, the HWC MACT does not require that Veolia analyze every feedstream prior to incineration; rather, it allows Veolia and other incinerators to use "other methods" such as "using analytical information obtained from others or using other published or documented data." 40 C.F.R. 63.1209(c)(2)(ii). The use of "other methods" is even referenced in the 2014 Draft Permit: "[Veolia shall] [d]etermine and record the value of the parameter for each feedstream by sampling and analysis or other method." *See* 2014 Draft Permit at § 2.0(D)(4)(d)(i)(A)

Thus, the statement in this paragraph should be deleted because it is contradictory to the HWC MACT, inconsistent with what has been imposed on other facilities in Region 5, and conflicts with other provisions of the 2014 Draft Permit.

Page 47 of 79, § 5.2.1, Full Paragraphs 1 & 2

The following statements are incorrect and should be deleted from the Statement of Basis:

> Veolia currently depends on information in a corporate database for "similar" waste streams without real knowledge of what metals are in the wastes it incinerates. Further, the database frequently contains information that is inconsistent with data provided by waste generators. Therefore, the existing FAP cannot assure compliance with the metals feedrate limits.
>
> Additionally, because Veolia's FAP does not ensure that each feedstream is appropriately characterized, the current FAP does not assure compliance with the feedrate limits in the permit

Veolia does not depend on information from a corporate database. Veolia characterizes each shipment of waste. Except for those waste streams that have exemptions defined in Veolia's FAP, Veolia analyzes wastes that are suspect for metals—i.e., if the process generating the waste, the waste type, the waste characteristics, or the history of facility indicate that metal maybe present. Thus, Veolia identifies the characteristic of each waste stream independent of a corporate database through analysis, generator knowledge, MSDSs, technical information, and reference documents to ensure compliance with existing regulations and permit requirements. These methods are consistent with the practices of other commercial hazardous waste incinerators in Region 5. *See* Ross Incineration Services, Inc., Waste Characteristics and Waste

Analysis Plan (April 2013) at VES 016106-016293 & Heritage-WTI, Inc., Waste Characteristics and Waste Analysis Plan (Sept. 18, 2014) at VES 016295-016537.

Page 48 of 79, § 5.2.1, Last Paragraph

The statement "Because Veolia would generally base metal feedrate calculations on actual feedstream analysis data and not on theoretical profile estimates..." is not a correct statement and should be deleted from the Statement of Basis. This statement infers that Veolia only uses theoretical estimates to calculate metal feedstreams. As noted above, Veolia characterizes each shipment of waste. Except for those waste streams that have exemptions defined in Veolia's FAP, Veolia analyzes wastes that are suspect for metals—i.e., if the process generating the waste, the waste type, the waste characteristics, or the history of facility indicate that metal maybe present.

Page 49 of 79, § 5.2.2(A)

This entire section is incorrect and flawed and should be deleted from the Statement of Basis.

Under Veolia's, Ross's and Heritage-WTI's WAPs, there are waste streams that are specifically exempt from sampling because of (a) safety concerns, (b) the impracticality of sampling the waste, or (c) the waste characteristics are of such a nature that the waste information provides all the required information to incinerate the waste. In these instances, the facilities rely on generator knowledge, MSDS information, or other waste profile information to properly characterize the waste. Although a waste may not be sampled, it does not mean that metals are being underreported. The metal concentrations are determined on generator knowledge, MSDS information, and other waste profile information to properly characterize the waste. In addition, waste streams that are not exempt from sampling that are suspect for metals are sampled and analyzed every time prior to incineration to calculate metal concentrations.

Veolia does not depend on information from a corporate database. Veolia characterizes each shipment of waste. Except for those waste streams that have exemptions defined in Veolia's FAP, Veolia analyzes wastes that are suspect for metals—i.e., if the process generating the waste, the waste type, the waste characteristics, or the history of facility indicate that metal maybe present. Thus, Veolia identifies the characteristic of each waste stream independent of a corporate database through analysis, generator knowledge, MSDS's, technical information, and reference documents to ensure compliance with existing regulations and permit requirements. These methods are consistent with the practices of other commercial hazardous waste incinerators in Region 5. *See* Ross Incineration Services, Inc., Waste Characteristics and Waste Analysis Plan (April 2013) at VES 016106-016293 & Heritage-WTI, Inc., Waste Characteristics and Waste Analysis Plan (Sept. 18, 2014) at VES 016295-016537.

Page 50 of 79, § 5.2.2.B., Paragraph 1

USEPA justifies the imposition of the enhanced feedstream analysis with the statement:

> Veolia's feedstreams are highly variable and metal compositions can vary significantly within the feedstream (i.e., heterogeneous feedstreams) and among feedstreams (variable feedstreams).
>
> Veolia treats and disposes a variety of solid, liquid and gaseous wastes which typically arrive in drums, roll-off containers or other similar bulk transport vehicles, totes, Gaylord boxes, tank trucks and cylinders. According to Veolia's website, in addition to other hazardous and non-hazardous waste, Veolia's Sauget facility accepts for incineration Drug Enforcement Administration controlled substances, drugs, goods with expired dates, seized goods, returned goods and lab chemicals. Because Veolia's Sauget facility accepts and incinerates a broad range of wastes, Veolia has explained that the individual streams that may make up the incinerator overall feed at any given time can vary greatly, depending on generator production and shipping schedules.

While portions of this statement are accurate, the variability of Veolia's waste streams does not justify Region 5's enhanced monitoring proposal. Veolia does accept a wide range of wastestreams, but this is also true for all of the commercial incinerators in the country, including the Ross and Heritage-WTI incinerators in Region 5. The varied waste streams do not support or justify a need to sample all waste streams. Veolia does sample and analyze those waste streams that are highly variable and uses the most current data to demonstrate compliance with the HWC MACT Rule and Title V permit requirements. However, some waste streams such as cylinders (which cannot be sampled but the contents are known), explosives, and reactive wastes pose significant safety concerns that make analysis imprudent and dangerous for Veolia staff. Other wastes, such as certain off-specification commercial products, controlled substances, and certain chemical wastes are made up of known constituents and do not vary in their compositions. Under Region 5's 2014 Draft Permit, Veolia would be required to sample and analyze these waste streams—a dangerous and wasteful proposition. Neither of the other two incinerators in Region 5 (Ross and Heritage-WTI) currently have to sample and analyze these types of waste.

Page 50 of 79, § 5.2.2.B., Paragraph 2

The following statement is incorrect and should be deleted from the Statement of Basis:

> In its 2012 investigation, EPA's National Environmental Investigations Center(NEIC) found that some nominally similar waste streams generated by different generators had significantly different metal concentrations, yet, as described above, Veolia did not analyze these wastes when they arrived onsite. Instead, Veolia relied upon an "overly broad" characterization of the wastes and assigned a single metal concentration value for the individual wastes. In one instance, for example, Veolia has assigned two waste streams, both classified as "cyanide containing wastes" and identified by Veolia as "very similar," two very different cadmium concentrations: 6,470 mg/kg and 1 mg/kg, respectively. NEIC suggested that, due to the potential variability in metal concentrations of some "very similar" wastes from different generators, Veolia should analyze waste streams generated by different generators each time they arrive on-site instead of relying on "overly broad profiles" to characterize these wastes.

The wastes discussed in the NEIC report are not "similar" waste streams. The waste containing the 6470 mg/kg of cyanide is a bulk liquid waste that is shipped to Veolia in 5000 gallon tankers. The 1mg/kg of cyanide waste stream is a container filled with individually-packaged and labeled unused products. The bulk waste stream was sampled and analyzed with a cyanide concentration of 6470 mg/kg. The individual packages are unused products, so the cyanide concentration is known by technical information. The bulk liquid waste is a perfect demonstration of wastestreams that vary and are therefore sampled and analyzed by the facility. Similarly, the unused product is a demonstration of a wastestream that does not vary and technical information is provided to support the chemical concentration and are therefore not sampled and analyzed by the facility. Region 5's use of this example to justify the need for enhanced analysis demonstrates the Agency's profound misunderstanding of the industry that it purports to regulate. Region 5's enhanced monitoring requirements would require Veolia to sample all waste streams containing metals regardless of the safety and environmental concerns, practicality, or the technical information received regarding the waste stream that clearly identifies the waste's constituents. These requirements are dangerous for Veolia staff, are unnecessary and wasteful, and are not required of the other incinerators in Region 5.

Page 50 of 79, § 5.2.2.B., Paragraph 3

The statement "Also, as noted in the NEIC report, '[s]amples of bulk liquids are not analyzed [by Veolia] for metals; instead, metals concentrations are calculated based on profile information stored in Veolia's waste tracking system (WTS). The WTS pulls information from the corporate tracking system, called the "I-Series."'" is not correct and should be deleted from the Statement of Basis.

Regardless of the waste being liquids or solids, Veolia characterizes each shipment of waste. Except for those waste streams that have exemptions defined in Veolia's FAP, Veolia analyzes wastes that are suspect for metals—i.e., if the process generating the waste, the waste type, the waste characteristics, or the history of facility indicate that metal maybe present.

Page 51 of 79, § 5.2.2.C.

The following statement is incorrect and should be deleted from the Statement of Basis:

> Veolia's current feedstream analysis and recordkeeping procedures could cause Veolia to significantly underreport concentrations of some metals in its feedstreams. NEIC's investigation revealed that Veolia may have significantly underreported concentrations of chromium and cadmium in some feedstreams. In one example, Veolia reported a chromium value of 228 milligrams per kilogram (mg/kg) for a certain waste in its databases while a material safety data sheet for that waste listed a total chromium value of 30,000 to 60,000 mg/kg. Because Veolia generally uses information contained in its databases to calculate metal feedrates rather than independently analyzing each feedstream before it is fed to the incinerator, Veolia may have used an incorrect concentration to calculate chromium feedrates in this case. Therefore, in the examples observed by NEIC, Veolia's possible use of incorrect metal concentrations to calculate feedrates may have resulted in significant underreporting of the actual metal feedrates. Without the proposed monitoring procedures, there is no way to evaluate the accuracy of the metal concentrations used by Veolia.

The waste profile that the NEIC report referred to consisted of spent filter media. The MSDS values were for unused carbon with copper and chromium that was provided as additional information. As a result, Veolia did not use the total chromium value defined on the MSDS to determine the metals concentration. Veolia currently samples and analyzes this waste stream every time it is received to determine the metals concentration.

Page 51-52 of 79, § 5.2.2.D.

The following statement is incorrect and should be deleted from the Statement of Basis:

> Analytical and data reporting errors may have resulted in inaccurate feedrate calculations for some metals. In its investigation, NEIC identified conflicting metals data between the profile package and the information entered in Veolia's databases. In one example, a profile reported a chromium concentration of 1.8 milligrams per liter (mg/L), yet Veolia used a value of 0 mg/L in its databases. In

another example, a profile reported a total mercury concentration of 4140 mg/kg but Veolia used a value of 25 mg/kg in its databases for at least 5 years. NEIC estimated that if a mercury concentration of 4140 mg/kg had been present in waste that was incinerated on August 28 and 29, 2011, Veolia would have exceeded the emissions and feedrate limits for mercury on those days. Because of this type of problem with conflicting entries, without any clear indication of which concentration is correct, it is possible that Veolia used incorrect metals concentrations for feedrate calculations on August 28 and 29, 2011, and very likely that Veolia uses incorrect metals concentrations on a regular basis.

The 1.8 mg/L value for chromium was not included in Veolia's waste profile and the TCLP values in the profile were all below detection limits. Thus, this allegation is incorrect and is of no support for Region 5's position. In addition, the mercury value of 25 mg/kg determined by Veolia was validated by the generator of the waste and Veolia is entitled to rely on the generator's representations under applicable regulations. Thus, the mercury value of 4140 mg/kg that Region 5 alleges Veolia fed on August 28 and 29, 2011 is incorrect and likewise does not support Region 5's draft permit proposal. Region 5's use of unsubstantiated and inaccurate allegations in support of its permitting decision is inappropriate and arbitrary and capricious. *See also supra* Part IV.H(1)(i)(c) for Veolia's specific response to this allegation by the NEIC.

2. *Region 5's Draft Permit Must Be Revised*

Page 9 of 172, § 1.3

The capacity of Storage Tanks for Liquid Wastes Tank #2 is 4931 gallons, not 4391 gallons as defined in the Table.

Page 13 of 172, § 2.1.7(a)

This section should be amended as follows to account for the different limits established at incineration Unit 4: "The Permittee shall not allow emissions of dioxins and furans from the facility in excess of 0.20 nanograms *(or 0.40 nanograms if the combustion gas temperature at the inlet to the initial particulate matter control device is 400 °F or lower based on the average of the test run average temperatures)* toxicity equivalents per dry standard cubic meter (ng TEQ/dscm), corrected to 7 percent oxygen. [40 C.F.R. § 63.1219(a)(1)]." (Inserted language in italics.)

Page 15 of 172, § 2.1(C)(1)

This section states that the permittee shall not burn hospital medical infectious waste. Veolia would like this requirement removed because, although the facility does not currently receive

and incinerate hospital medical infectious waste, it does possess a permit from the Illinois EPA to accept and incinerate potentially infectious medical waste. There are no current prohibitions or regulatory reasons why the facility cannot accept and incinerate hospital medical infectious waste as long as it meets all the regulatory requirements.

Page 15 of 172, § 2.1(C)(2)

Section 2.1(C)(2) provides:

> The Permittee must operate Units 2, 3 and 4 in compliance with the following operating parameter limits (OPLs). The Permittee must also comply with the OPLs contained in the Notification of Compliance (NOC) required pursuant to condition 2.1(E)(2), below. If any OPL contained in this condition 2.1(C)(2)differ from the corresponding OPL contained in the Permittee's most recent NOC, the Permittee may submit an application requesting a revision to the OPLs in this permit, pursuant to 40 C.F.R. § 71.7(e)(1). Nothing in this permit obligates the Administrator to approve an application to revise OPLs in this permit.

The facility is required to conduct Comprehensive Performance Testing every 5 years and then in accordance with 40 C.F.R. 63.1207(j)(1), submit a Notification of Compliance (NOC) to USEPA within 90 days of the completion of testing. Upon postmark of the NOC, the facility must comply with all operating requirements specified in the NOC. Complying with this requirement would inevitably put the NOC and the Operating Conditions defined in this permit in conflict. Veolia is scheduled to test all of the incinerators again in 2018, which will result in OPLs based on performance tests that are different than those included in this permit. If there is no mechanism in this permit to address that the new OPLs should be followed in lieu of the outdated requirements included in this permit, then the facility will have to operate under both sets of conditions. This puts the facility in a compromising position and will create compliance issues. A significant modification can be submitted at the same time as the NOC is submitted but the Agency has 18 months to review and approve the submittal. This again creates a period where the new NOC OPLs can and will be different than what is included in the permit. It is common in many permits where these situations can occur that wording is placed in this section that states that the current NOC OPLs are always the point of compliance until a significant modification is approved by the Agency. This section must be amended to address this conflict and to clearly identify what set of OPLs are applicable and enforceable.

Page 15-16 of 172, § 2.1(C), OPL Table

The "minimum secondary combustion chamber temperature" for incineration Unit 3 should be the same as incineration Unit 2's, i.e 1885 °F.

The value for incineration Unit 4 for "minimum carrier fluid (gas or liquid) flowrate or pressure drop for activated carbon injection system" should be N/A. This criteria is met by high and low pressure switches supplied by the manufacturer and previously approved by USEPA. The 3.10 gal/lb Cl_2 value is for "minimum carrier fluid flowrate or nozzle pressure drop for the spray dryer absorber" in the table on page 17.

Page 34 of 172, § 2.0(D)(1)(i)(ii)

The Xact 640 is incapable of measuring beryllium. Because of this the 2014 Draft Permit requires Veolia to "quantify [beryllium] emissions using [the beryllium] feedrate as determined according to 2.1(D)(4)(d) for the most recent 12-hour period for which feedstream analysis data for [beryllium] is available and the system removal efficiency [SRE] and exhaust parameters used by the Permittee to estimate emissions of [beryllium] for that 12-hour period."

However, Veolia cannot calculate an SRE specific for beryllium, a low volatile metal (LVM), from the 2013 CPT data because analytical results for the waste feeds and emissions were predominately non-detect values—i.e., there was not enough beryllium in either the feed or in the emissions to obtain an accurate measurement. Thus, Veolia would need to use a SRE for LVM, instead of one for beryllium. The lowest SRE for LVM among the three incinerators is 99.99918%.

Page 36 of 172, § 2.1(D)(1)(i)(x)

The following requirement is confusing, impractical, and cannot be implemented as written:

> Any one-hour block average CEMS reading above any parametric range, as defined in condition 2.1(D)(1)(i)(iii), is a deviation.

Condition 2.1(D)(1)(i)(iii), states: "The parametric range for each metal or class of metals measured by the multi-metals CEMS is equal to the emission limit for that metal or class of metals specified in condition 2.1(A)(7) of this permit." As a result of the definition of the parametric range that is defined as the emission limit, then the one-hour block average CEM reading set at that parametric range can never be exceeded. Using mercury as an example, the parametric range would be set at 0–130 ug/dscm, with 130 being the emission limit. Since the range of the instrument is set at 0–130 then the instrument cannot, by definition, read above 130 ug/dscm because this condition requires the range to be set at the emission limit. An instrument set at that range will never show a reading above the emission limit.

This condition becomes even more confusing when trying to implement this requirement with LVM and SVM. Since the instrument cannot read beryllium, the parametric range for the LVM compounds, arsenic and chromium, is 92 ug/dscm. The parametric range for SVM compounds, cadmium and lead, is 230 ug/dscm. Because LVM and SVM are each made up of two compounds, it is difficult for Veolia to determine if it should set the parametric range at half the

emission limit or should proceed as instructed by this condition and set the range at the emission limit. The permit conditions do not set forth how to deal with the LVM and SVM compounds nor do they provide how the multi-metals CEM would be able to set the ranges for an emission standard that includes multiple compounds.

Page 36 of 172, § 2.1(D)(1)(i)(x)(i)

Veolia is unable to implement the following permit condition as written:

> From the time that a CEMS records a deviation, the Permittee must immediately take corrective action to reduce emissions of the affected metal(s) and record all corrective actions taken. Corrective actions may include, but are not limited to, stop feeding or reduce the feedrate of the batch of waste burned when the deviation occurred, or adjustment to combustion conditions. The Permittee must document all corrective actions in the report required by condition 2.1(D)(1)(i)(x).

As explained in the comment to § 2.1(D)(1)(i)(x) immediately above, the deviation can never occur due to the requirement for setting the parametric range at the emission limit. However, there are other problems with this permit condition, even if a deviation could occur. The multi-metals CEM that is being proposed is not a real-time CEMS. A reading is obtained every 15–20 minutes versus other real-time instruments that the facility uses that produce a value within seconds. This delay makes it almost impossible to correlate between what is being incinerated and the CEMS reading. Veolia's waste feeds and feedrates can vary minute by minute, so what occurred 15-20 minutes ago maybe entirely different than what was occurring when the value was actually obtained. Also, the waste that was being fed 15–20 minutes ago may be completely gone when the reading is obtained so that there is no way to go back and do more analysis to prove or disprove the instrument reading. It is therefore impossible to pinpoint with any accuracy what was causing the deviation with an instrument that has a 15–20 minute delay. This is not a real-time instrument and, since the facility's feeds and operating conditions change minute by minute, parametric monitoring as proposed by Region 5 in the 2014 Draft Permit is impossible.

Page 41 of 172, § 2.1.4, Analysis of Feedstreams

Veolia ES Technical Solutions currently operates with an Illinois EPA approved Waste Analysis Plan (WAP) and a Feed Stream Analysis Plan (FAP) that "contains the minimum elements required by 40 C.F.R. 63.1209(c)(2)(i) through (vi)" as defined in USEPA Region 5's Statement of Basis. Region 5 goes on to say that the FAP is not sufficient to determine that waste streams comply with the feedrate limits and cites to the NEIC Multimedia Compliance Investigation Observations Report. Veolia contests the findings contained in the NEIC Report. *See supra* Part IV.H(1)(i)(c) (setting forth Veolia's responses). Further, Veolia takes many steps to ensure that every waste stream incinerated is accurately characterized pursuant to the HWC MACT

requirements. The enhanced monitoring that Region 5 is requiring in the 2014 Draft Permit, however, causes serious safety concerns by requiring sampling and analysis of wastes that are currently exempted from analysis (e.g., explosives, certain reactives, controlled substances), or are impossible to sample (e.g., gas cylinders, sealed filters). The enhanced monitoring would also require Veolia to sample other exempted wastes such as lab packs and off-specification commercial products despite the fact that the metals concentrations of these wastes are already known. The requirements contained within Veolia's 2014 Draft Permit are extraordinarily more burdensome then Veolia's current WAP and more extreme than the requirements for the two commercial incinerators that are also regulated by Region 5. Currently, the two other commercial incinerators in Region 5 are allowed to rely upon generator knowledge, MSDS information, or other waste profile information to exempt certain waste from sampling either because of safety concerns, impracticality of sampling, or the waste characteristics are of such a nature that the waste information provides all the required information to incinerate the waste. *See* Ross Incineration Services, Inc., Waste Characteristics and Waste Analysis Plan (April 2013) at VES 016106-016293 & Heritage-WTI, Inc., Waste Characteristics and Waste Analysis Plan (Sept. 18, 2014) at VES 016295-016537.

Veolia has taken many steps to enhance its waste characteristic procedures since the promulgation of the HWC MACT. Further, Veolia has implemented certain suggestions resulting from the NEIC inspection in 2011 and the final report dated August 2012. Veolia samples and analyzes all suspect waste for metals and has developed a list of suspect industries whose waste may contain metals. Metals analyses are conducted on wastes received from these industries even though the waste may not contain metals. All wastes are characterized for metals concentration prior to incineration. This characterization may be performed through generator knowledge, MSDS's, technical documents, or through sampling and analysis. Thus, if certain waste is able to be completely characterized through information provided by the generator, then the waste is not sampled or analyzed. These wastes are called "exempt" wastes, a common term in the incineration industry that denotes wastes that require no sampling and analysis of the waste because their chemical properties are sufficiently documented to enable them to be processed and managed properly in accordance with the HWC MACT.

One category of exempt wastes are those that present safety concerns, such as explosives, controlled substances, or reactive wastes. Sampling and analysis are "exempted" because the waste could endanger an employee by sampling or performing certain analysis (e.g., BTU, flashpoint). However, in all cases the waste is still characterized to ensure that all regulatory and permit requirements are met. Another category of exempt wastes are wastes that are impractical to sample such as aerosol cans, sealed filters, or gas cylinders. These wastes are appropriately characterized by means other than sampling to ensure that all regulatory and permit requirements are met. Exempted wastes may also consist of off-specification products either in their consumer packaging or packaged in other containers that make it more practical for shipping. Again, since

detailed information is provided by the manufacturer of the product, the waste is exempt from sampling and analysis but appropriately characterized to ensure that all regulatory and permit requirements are met. Ross's WAP and Heritage-WTI's WAP use this "exempt" waste process and these facilities do not sample and analyze wastes that fall into these categories.
The enhanced monitoring provided in Veolia's 2014 Draft Permit, Page 45 of 172, § 2.1(D)(4)(d)(ii)(F), expressly allows this "exempt" waste process, but removes the exemption if the waste contains mercury, LVM and SVM. This change would require Veolia to sample wastes that pose safety and environmental risks such as explosives, controlled substances or reactives. It would also require the facility to sample waste filters, aerosol cans and cylinders, again causing safety concerns. It would require sampling of off-specification products of which the exact chemical composition is known causing unnecessary releases of chemicals to the environment, not to mention the waste of resources and generation of waste products through the sampling and analysis procedures. If using generator knowledge, MSDSs, technical, or reference documents are acceptable to characterize wastes that are not sampled and analyzed when the waste contains no metals, then it should be acceptable to characterize wastes when the wastes contain metals. If this is sufficient for the other two incinerators in Region 5, then it should be sufficient for Veolia.

Veolia has enhanced existing procedures to require sampling and analysis of waste streams that contain metals. For wastes not exempted from sampling by the current FAP/WAP, Veolia analyzes those wastes every time and the values obtained are used to document compliance. These enhancements are far more stringent than those requirements found in the Ross and Heritage WAPs. In fact, Veolia is willing to accept the conditions contained in the approved WAP of Heritage-WTI, Inc. There are no current Agency actions to modify their WAP, so the Agency must feel that their WAP is adequate to show compliance with the existing regulations.

Page 42 of 172, § 2.1.4(d)(ii)

The Agency is requiring Veolia to submit a revised FAP for approval within 60 days of the permit becoming effective. Due to the complexity of these types of plans and to ensure that all required elements are incorporated, Veolia would expect to meet with the Agency several times to ensure the plan is adequate. As a result, Veolia is requesting that this requirement be changed from 60 days to 180 days to allow the necessary time to ensure all required elements are included.

Page 43 of 172, § 2.1.4(d)(ii)(C), Batch Sampling Procedure

The statement "Feedstreams which are exempt from sampling in accordance with condition 2.1(D)(4)(d)(ii)(F) must not be batched, treated, blended, mixed, or otherwise

altered, unless the Permittee samples and analyzes the otherwise exempt feedstream" is vague and confusing.

The reason for the exemptions from sampling and analysis defined in the 2014 Draft Permit is to avoid safety and environmental concerns of sampling explosives, controlled substances or reactive material when there is sufficient information available to calculate metal feedrates. These exemptions also prevent Veolia from having to sample wastes which have already been sampled and are impractical to sample again, particularly when there is already sufficient information to calculate feedrates. These exemptions also avoid the sampling of off-specification products where there are MSDSs that completely define the waste. By requiring that exempted wastes that are batched, treated, blended, mixed, or otherwise altered be sampled, Region 5 is unnecessarily placing employees and the public at risk and causing Veolia to incur additional costs that its direct competitors in Region 5, Ross and Heritage-WTI, do not have to bear. In addition, if the Agency is allowing sampled waste to be batched, treated, blended, mixed, or otherwise altered, exempted waste should be permitted to be batched, treated, blended, mixed, or otherwise altered as long as information is available to determine metals concentration and feedrates to ensure compliance with the HWC MACT Rule and the Title V Permit requirements.

Page 44 of 172, § 2.1.4(d)(ii)(E)(II)

Veolia objects to the following requirement:

> If the applicable metal is not detected at or above the reporting limit for that metal, as defined in condition 2.1(D)(4)(d)(ii)(E)(III), in any sampling analysis required by condition 2.1(D)(4)(d)(2), the metal concentration shall be equal to the reporting limit, as defined in condition 2.1(D)(4)(d)(ii)(E)(III), from the sampling analyses required by condition 2.1(D)(4)(d)(ii).

USEPA used "non-detects" as zeros in formulating the HWC MACT rule and Region 5 cannot now reject this approach by requiring that "non-detects" be reported at the reporting limit.

Veolia agrees with Region 5 that the reporting limit is the only defensible number that should be used, but the HWC MACT must be applied consistently. The method that was used to set the standards has to be the one that is used to show compliance. Thus, Region 5 cannot now require non-detects to be reported at the reporting limit. This would artificially inflate Veolia's emissions and potentially create compliance issues where none actually exist. This also will cause problems with Veolia's compliance with the Emergency Planning and Community Right-to-Know Act. The requirements of this condition place Veolia in a "catch-22"—if Veolia does not comply with this permit condition it will be in violation of its Title V permit; however, if Veolia does comply with this condition it will be forced to not certify that its EPCRA emissions reports are accurate (because the emissions are inflated) and thus will be in violation of EPCRA.

Page 45-46 of 172, § 2.1.4(d)(ii)(F), Exemptions to the analysis procedures

Veolia objects to the entirety of subsection (F). This subsection arbitrarily and capriciously omits provisions of Veolia's current FAP/WAP and imposes requirements that are onerous, unsafe, and place Veolia at an unfair disadvantage as compared to other incinerators in Region 5.

The permit requirement causes serious safety concerns by requiring sampling and analysis of waste that are currently exempted (e.g. explosives, certain reactives, controlled substances) or impossible to sample (e.g. gas cylinders, sealed filters). The enhanced monitoring also requires the sampling of other defined "exempt" waste such as lab packs and off-specification commercial products although the metals concentration are known. These requirements are not required by Veolia's current FAP/WAP and are more stringent than the two commercial incinerators that are also regulated by Region 5. *See* Ross Incineration Services, Inc., Waste Characteristics and Waste Analysis Plan (April 2013) at VES 016106-016293 & Heritage-WTI, Inc., Waste Characteristics and Waste Analysis Plan (Sept. 18, 2014) at VES 016295-016537.

If using generator knowledge, MSDS's, technical or reference documents are acceptable to characterize wastes that are not sampled and analyzed when the waste contain no metals, than it should be acceptable to characterize wastes, when the wastes contain metals. The Ross and Heritage-WTI WAPs allow these exemptions regardless of the metal content.

Region 5 fails to explain why the exemptions defined in § 2.1.4(d)(ii)(F), have eliminated some of the defined exemptions in Veolia's current FAP/WAP. One of the exemptions that has been removed is for visually identifiable material such as glass, batteries, metal parts, etc. These types of wastes in many cases cannot be sampled due to their design and construction; however, the chemical constituents are known from MSDSs, generator knowledge, technical data or reference documents. USEPA must reinstate this exemption. Veolia also requests that the Agency include in the exemption list "other waste that pose safety, health, environmental and sampling difficulties as determine and justified by the Technical Manager." The Ross and Heritage-WTI WAPs give this latitude to the Technical Manager so that he/she can determine whether sampling would present safety and environmental concerns.

Additionally, the requirement in § 2.1.4(d)(ii)(F)(VII) requiring a "written determination of exemption from these analysis procedures [that] shall describe the information reviewed and the basis for the determination that no mercury, LVM or SVM is present" is unnecessary and overly burdensome. Veolia maintains technical records on the waste streams approved at the facility and the Waste Profile Sheets and supporting documentation supports the Technical Manager's decision on sampling and analysis. To require additional documentation, such as describing the basis for the decision is not required in the RCRA regulations for WAPs at 40 C.F.R. 264.13, nor is it required in either the Ross or Heritage-WTI WAPs or Title V permits. This requirement

needlessly duplicates information that is already available at the facility and should be removed from the 2014 Draft Permit.

Page 46 of 172, § 2.1.(D)(4)(d)(ii)(F)(IX)

Veolia objects to the following permit requirement:

> The Permittee may request approval from the Administrator to exempt any waste that is not listed in conditions 2.1(D)(4)(d)(ii)(F)(I) through (VI) from the analysis procedures set forth in condition 2.1(D)(4)(d)(ii)(A) through (E). The Permittee shall describe the information reviewed and the basis for the determination that no mercury, LVM or SVM is present in the wastes proposed for exemption.

The exemption should be expanded to include wastes that contain metals. Waste streams that contain metals can be properly characterized without sampling to determine the metals concentration. Veolia also respectfully requests that the section provide the amount of time the Agency has to approve these requests. If these requests are not reviewed and responded to in a timely manner, Veolia will be unable to respond to the needs of its customers and will lose business as a result. Veolia will only incinerate waste that is properly characterized either by sampling and analysis, generator knowledge, MSDSs, technical documents, or other reference material.

Page 56 of 172, § 2.1(D)(4)(o)(ii)(A)

The citation to the HWC MACT in this paragraph needs to be corrected. It should be 40 C.F.R. §63.1209(n)(2)(vii), not 40 C.F.R. §63.1209(n)(2)(ii).

Page 58-59 of 172, § 2.1(D)(4)(p)

This paragraph does not adequately track the language of 40 C.F.R. §63.1209(p) and should be amended accordingly: "The Permittee must monitor the pressure instantaneously and the automatic waste feed cutoff system must be engaged when negative pressure is not *adequately* maintained." (Inserted language in italics.)

Page 65 of 172, § 2.1(D)(11)(a)(xvi)(A) & (B)

This paragraph does not pertain to Veolia's incineration units and should be removed.

Page 77 of 172, § 2.1(E)(4)(a)

This paragraph does not adequately track the language of 40 C.F.R. §63.1206(c)(3)(vi) and should be amended accordingly: "For *each set of* 10 exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber (i.e., when the hazardous waste residence time has not transpired since the hazardous waste feed was cutoff) during a 60-day block period, you must submit to the Administrator a written report within 5 calendar days of the 10th exceedance documenting the exceedances and results of the investigation and corrective measures taken." (Inserted language in italics.)

Page 77-78 of 172, § 2.1(E)(5)

This paragraph does not adequately track the language of 40 C.F.R. §63.1206(c)(8)(iv) and should be amended accordingly: "If you operate the combustor when the detector response exceeds the alarm set-point or the bag leak detection system is malfunctioning more than 5 percent of the time during any 6-month block time period, you must submit a notification to the Administrator within 30 days of the end of the 6-month block time period that describes the causes of the exceedances and bag leak detection system malfunctions and the revisions to the design, operation, or maintenance of the combustor, baghouse, or bag leak detection system you are taking to minimize exceedances and bag leak detection system malfunctions. To document compliance with this requirement:."

Page 80 of 172, § 2.1(E)(9)

The cross reference should be to condition 2.1(C)(4), not to condition 2.1(B)(4).

Page 80 of 172, § 2.1(E)(10)

This section should be amended to include the requirements of 40 C.F.R. §63.1207(e)(1)(i)(A), which states that "[t]he Administrator will notify you of approval or intent to deny approval of the site-specific test plan and CMS performance evaluation test plan within 9 months after receipt of the original plan."

Page 82 of 172, § 2.1(E)(10)(c)(ii)

This section should be amended to include a new subsection C. The new subsection should state: "The Administrator will approve or deny the petition within 30 days of receipt and notify you promptly of the decision pursuant to the requirements of 40 C.F.R. §63.1207(e)(3)(ii)(B)."

Page 99 of 172, § 2.2(E)(3)

There are no enclosed storage tanks located in MP-1, MP-2 or in the Lab Pack Repack areas. The last sentence of this paragraph should therefore be deleted.

Page 105 of 172, § 2.4(D)(1)

Veolia's tanks are not below atmospheric pressure; thus, the sentence "The Permittee must monitor the pressure continuously to ensure that the pressure in the tank remains below atmospheric pressure" should be removed.

Page 117 of 172, § 2.5(E)(2)(D)

This paragraph discusses calculation of VOM from the bulk pits using the most current method, however, because there are no enclosed storage tanks located in the bulk solid waste storage facility, this discussion should be deleted.

Page 124 of 172, § 2.7(D)(4)

There is not a regulatory basis for performance testing this boiler. Further, while Veolia has historically been required to perform performance testing for CO, the draft permit now adds NOx to the requirements. Veolia disagrees primarily with the need for any performance testing but also the additional emissions test. This is a natural gas fired boiler and there are published emission factors which can be used for both CO and NOx.

Page 125 of 172, § 2.7(E)(2)(h)

Veolia does not have a SSMP for the boiler, which is subject only to tune-ups and energy assessments. Therefore, this requirement should be deleted.

Page 125 of 172, § 2.7(E)(2)(e)

The annual compliance report requires a summary of performance test results. Performance testing is required once every 5 years. If performance testing is required, Veolia would like this section to read as follows: "A summary of the results of performance tests conducted during the reporting period if applicable."

Page 129 of 172, § 2.8(C)(10)

These fuel requirements are applicable under Subpart ZZZZ, if, and only if, Veolia participates in an emergency demand response program. The draft permit implies the facility is subject to the fuel requirements at all times beginning January 1, 2015.

Page 150 of 172, § 3.1(C)

Section 3.1(C)1 requires emissions calculations to be chosen from a hierarchically ranked list of options. Section 3.1(C)2 requires Veolia to document review of the hierarchy prior to selection of an emissions calculation methodology, including a demonstration of the appropriateness of the selected emission factor. The draft permit clearly identifies emission calculation methods for Veolia emission units lacking published emission factors or commercially available emission calculation software. Review, demonstration, and documentation of the choice of methodology is unnecessary and these requirements should be deleted.

K. Region 5's Statement of Basis Is Contradictory and Does Not Support the Conclusions Contained Therein

Region 5's rationale for the provisions contained within the 2014 Draft Permit are unsound and contradictory. USEPA finds (a) that Veolia's CPT testing, OPLs and FAP, as supplemented in the 2014 Draft Permit, are adequate for HWC MACT compliance but also determines (b) that Veolia's CPT testing, OPLs and FAP, as supplemented, are inadequate for HWC MACT compliance in order to justify the installation of three multi-metals CEMS—both findings cannot be simultaneously true.

USEPA acknowledges in the Statement of Basis that the emission levels achieved during compliance tests ("CPT testing") are typically the highest emission levels a source emits under reasonably anticipatable circumstances and worst case operating conditions:

> To ensure that these OPLs do not impede normal day-to-day operations, sources generally take measures to operate during compliance testing under conditions that would normally produce the highest emissions. For example, sources often feed ash, metals, and chlorine during compliance testing at substantially higher than normal levels (e.g., by spiking the feedstream) to maximize the feed concentration, and they often detune the air pollution control equipment to establish operating limits on the control equipment that provide operating flexibility. Thus, the emission levels achieved during compliance tests are typically the highest emission levels a source emits under reasonably anticipatable circumstances.
>
> By designing its CPT to generate emissions under worst case operating conditions, a source can establish OPLs that account for variability in operations (e.g., composition and feedrate of feedstreams, as well as variability of pollution

> control equipment efficiency) and that do not impede normal operations. Thus, the feedrate OPL would be based on waste levels fed during the CPT unless the regulatory authority approves a request for the source to extrapolate to a higher allowable feedrate (and emission rate) limit.

Statement of Basis at 39 (footnotes omitted). Region 5 acknowledges that Veolia through its CPT Tests provided sufficient information to enable the Agency to establish OPLs for mercury, SVM and LVM that satisfy the requirements of the Act and the HWC MACT:

> EPA has reviewed Veolia's CPT test report dated January 28, 2014 (the 2014 CPT report) and Veolia's Notification of Compliance (NOC) dated January 28, 2014 (the 2014 NOC) and determined that there is sufficient information to enable EPA to establish OPLs for mercury, SVM and LVM that satisfy the requirements of the Act and the HWC MACT. Specifically, EPA has determined that the OPLs shown in Table 9, below, are supported by the available CPT data. Therefore, consistent with 40 C.F.R § 71.6(a)(1), EPA is proposing to incorporated these OPLs into the permit. *See* Condition 2.1(C)(2).

Statement of Basis at 40 (footnotes omitted). By Region 5's own admission, Veolia's CPT tests have established OPLs that represent the highest emission levels Veolia would typically emit under reasonably anticipatable circumstances and worst case operating conditions. Having acknowledged the adequacy of Veolia's CPT tests, a few pages later in the Statement of Basis, Region 5 discards the adequacy of Veolia's CPT tests in an attempt to justify the installation of multi-metals CEMS:

> Veolia conducted comprehensive performance tests (CPTs) at each of the incinerators in October 2013. The results of those CPTs demonstrated, among other things, that the emissions from the three units were significantly different, despite the fact that Veolia had incinerated similar wastes during the tests. This illustrates that a simple linear calculation may not be appropriate for estimating metal stack concentrations from the emission units. As discussed at section 5.3.3, below, EPA has identified several possible reasons for the differing emissions at the three units. Further, EPA does not know with which metals chlorine or other anions preferentially react in the gas stream and which metal chlorides are more easily captured in Veolia's air pollution control equipment.

Statement of Basis at 53-54. If Region 5 really believed that Veolia's CPT test results were flawed, Region 5 should not have accepted the results. The Agency should have required Veolia rerun the tests rather than require the "after-the-fact" installation of three multi-metals CEMS.

Similar contradictions are found in USEPA's discussion of Veolia's FAP. First, Region 5 criticizes it as being inadequate and proposes minimum mercury, LVM and SVM analysis procedures in the permit to address the deficiencies:

> EPA has reviewed Veolia's FAP, which is available as part of the permit record for this proposed permit renewal action, and other monitoring requirements in the

existing 2008 permit, and determined that they are not sufficient to determine that waste streams comply with the feedrate limits or assure compliance with applicable emissions limits for metals. Although Veolia's FAP contains the minimum elements required by 40 C.F.R. § 63.1209(c)(2)(i) through (vi), for the reasons outlined below, EPA has found that the existing FAP is not sufficient to ensure that the mercury, lead, arsenic, beryllium, cadmium and chromium concentrations in the waste streams are no greater than the concentrations stated in the waste profiles that Veolia has used to calculate metal feedrates. As discussed below, Veolia currently depends on information in a corporate database for "similar" waste streams without real knowledge of what metals are in the wastes it incinerates. Further, the database frequently contains information that is inconsistent with data provided by waste generators. Therefore, the existing FAP cannot assure compliance with the metals feedrate limits.

Additionally, because Veolia's FAP does not ensure that each feedstream is appropriately characterized, the current FAP does not assure compliance with the feedrate limits in the permit.

For the reasons further discussed below, Veolia's current FAP is not sufficient to ensure that the mercury, SVM and LVM concentrations in the waste streams are no greater than the concentrations stated in the waste profiles that Veolia uses to calculate metal feedrates. Therefore, the FAP cannot assure compliance with the feedrate limits for mercury, SVM and LVM. Compliance with the feedrate limits is a fundamental step in assuring compliance with the HWC MACT emissions limits. To address the deficiencies in Veolia's FAP described above, and to assure compliance with the feedrate limits, EPA has proposed minimum mercury, LVM and SVM analysis procedures in the permit...

Statement of Basis at 47. USEPA asserts the supplemental feedstream analysis procedures assure compliance with the proposed feedrate limits, and through them, with applicable HWC MACT emissions limits:

> The above feedstream analysis provisions supplement any analysis procedures specified in Veolia's FAP for mercury, LVM and SVM, and supersede any less stringent provisions in the FAP. Incorporation of these requirements into the Title V permit would not eliminate Veolia's obligation to maintain an adequate FAP, consistent with 40 C.F.R. § 63.1209(c); rather, the permit would specify minimum feedstream analysis procedures to assure compliance with the proposed feedrate limits, and, through them, with applicable HWC MACT emissions limits.

Statement of Basis at 48. Subsequently, USEPA states that installation of multi-metal CEMS are necessary to verify that the feedrate limits and the supplemental feedstream analysis procedures assure compliance with the HWC MACT emissions limits:

> To verify that the feedrate limits and the feedstream analysis procedures proposed in this Title V permit renewal are sufficient to assure continuous compliance with the HWC MACT emissions limits, EPA is proposing to require that Veolia install

> and operate a multi-metals CEMS at each incineration unit for a period of at least 12 months. Veolia will operate each multi-metals CEMS as a CPMS, using the metal concentrations measured by the multi-metals CEMS as a parametric indicator of compliance with the emissions standards and to verify the adequacy of the feedrate limits.

Statement of Basis at 54. Once again, if Region 5 really believed that the supplemental feedstream analysis procedures proposed in the 2014 Draft Permit did not assure compliance with the HWC MACT, USEPA should have proposed additional procedures until it had such assurance.

In short, the Agency cannot simultaneously find (a) that Veolia's CPT testing, OPLs and FAP, as supplemented, are adequate for HWC MACT compliance and later determine (b) that Veolia's CPT testing, OPLs and FAP, as supplemented, are inadequate for HWC MACT compliance in order to justify the installation of three multi-metals CEMS. This exemplifies Region 5's inconsistent and contradictory reasoning and demonstrates the Agency's arbitrary and capricious decisionmaking.

L. Region 5's Discussion of Environmental Justice Considerations Contains Inaccurate, Misleading, Prejudicial and Conflicting Information

Veolia's facility has been located in Sauget, Illinois for over thirty years. During this time period, USEPA personnel have visited the Veolia site on numerous occasions. Region 5 nevertheless inaccurately states "Veolia is located in East St. Louis, Illinois, an area with overburdened communities, and the source is of significant public interest." Statement of Basis at 75. Region 5's statement is simply not true. Veolia is located at 7 Mobile Avenue, Sauget, Illinois 62201, and the facility is not of a "significant public interest" as evidenced by the lack of attendance and comments at the public hearing regarding the 2014 Draft Permit that was held on December 3, 2014. *See* Hearing Transcript, VES 016558–016569 and Sign-in Sheet, VES 019307.

Premised on this inaccuracy, USEPA goes onto cite various statistics in an attempt to persuade the public that additional monitoring requirements set forth in Veolia's draft Title V permit are authorized and necessary. Rather than attempting to draft a persuasive Statement of Basis that inflames prejudice, Region 5's first goal should be to draft an accurate Statement of Basis. After revising the Statement of Basis to accurately reflect Veolia's location, USEPA needs to perform additional study and collect further evidence using the correct Veolia location in Sauget, Illinois to determine whether environmental justice should even be discussed in the Statement of Basis. If such issues should be discussed, the Agency should reissue the Statement of Basis and reopen the draft permit for comment.

Further, the manner in which USEPA discusses environmental justice in the context of compliance with the HWC MACT attempts to create a misleading impression that Veolia has not been and would not be in compliance with the HWC MACT, but for the additional and specific monitoring requirements set forth in the draft permit:

> The Title V Program itself does not grant EPA the authority to create new limits or other requirements based on these (Environmental Justice) concerns. As previously discussed, the Title V permitting program codified under 40 C.F.R. Part 71 provides EPA with the authority to incorporate into permits 'all operational requirement and limitations that assure compliance with all applicable requirements' and monitoring 'sufficient to yield reliable data from the relevant time period that are representative of the sources' compliance with the permit' that will assure compliance with all requirements of the Act. Through this proposed permit renewal action, EPA is incorporating monitoring requirements necessary to assure compliance with all applicable requirements.
>
> EPA believes that compliance with the HWC MACT requirements will help protect the air quality around Veolia, which will benefit the entire community. To ensure compliance with the feedrate limits in the permit, EPA has included in the Title V permit additional and specific monitoring requirement for heavy metals ... [t]he proposed monitoring requirements are based on site-specific conditions at the Veolia facility and will help protect human health and the environment from the consequences of emissions of mercury and other metals by providing further assurance that Veolia will not exceed its permitted limits.

Statement of Basis at 77.

As the cited passage from the Statement of Basis indicates, Veolia and Region 5 are in agreement that the Title V Program does not grant USEPA the authority to create new limits or other requirements based on these Environmental Justice concerns. Given this fact, Region 5 had no reason to raise Environmental Justice in the Statement of Basis for Veolia's draft permit. Veolia and the Agency are also in agreement with the non-contested statement that compliance with the HWC MACT will help protect the air quality around Veolia and benefit the entire community.

However, the foregoing noncontroversial statements are precursors to Region 5's false conclusion that "[t]o ensure compliance with the feedrate limits in the permit, EPA has included in the Title V permit additional and specific monitoring requirement for heavy metals...[t]he proposed monitoring requirements are based on site-specific conditions at the Veolia facility and will help protect human health and the environment from the consequences of emissions of mercury and other metals by providing further assurance that Veolia will not exceed its permitted limits."

This statement is false on many levels. First and importantly, Veolia has always ensured compliance with the feedrate limits in the permit by conducting and demonstrating compliance through emission testing as defined in 40 C.F.R. 63.1209. Any implication to the contrary by the Agency through this statement or otherwise is false and prejudicial. Further, the proposed monitoring requirements, such as the CEMS, do not change Veolia's history of compliance or effect Veolia's future compliance. The CEMS is not and cannot be used to assure compliance by

Veolia, and to the extent Region 5 asserts otherwise in the Statement of Basis, such assertions are untrue and misleading. The CEMS is purported to be a multi-metals monitoring device by Region 5 and by others with a financial incentive to sell such devices. Unlike the HWC MACT standards, the CEMS has never been shown to protect human health and the environment from the consequences of emissions of mercury and other metals in the stack emissions from a commercial hazardous waste incinerator. Region 5's statements to the contrary are false and prejudicial to Veolia.

Additionally, Veolia's facility has not moved and the demographics in the area in which it is located have not changed. To the extent the Agency attempts to justify the additions contained within the draft permit, in part, due to the location of the facility, Region 5 must explain why in 2008 Region 5 exercised its judgment and issued Veolia its permit without such conditions. The Agency cites to the 2000 U.S. Census data in the Statement of Basis in order to support its environmental justice discussion. This exact data existed in 2008 when Region 5 issued Veolia's Title V permit. The facility's location and the surrounding demographics have not changed since 2008, but the Agency's decisions with regard to Veolia's permit have changed. Region 5 should explain why it considered the same data, but arrived at a different conclusion.

M. USEPA's Notice failed to comply with the requirements of § 71.11(d)(4)

USEPA's Notice of Proposed Renewal of Veolia's Title V Permit ("Notice") failed to comply with 40 C.F.R. § 71.11(d)(4). Section 71.11(d)(4) provides "(i) ... [a]ll public notices issued under this subpart shall contain the following minimum information: ... (B) The name and address of the permittee or permit applicant and, if different, of the facility regulated by the permit, except in the case of draft general permits." Likewise, "(ii) ... [a]ny public notice of a hearing shall contain ... (A) [t]he information described in paragraph (d)(4)(i) of this section[.]" As identified by the Illinois Secretary of State, Veolia's principal office is located at 700 E. Butterfield Rd., Ste 201, Lombard, Illinois, 60148, but this address was not included in USEPA's Notice. Section 71.11(d)(4) further provides that all public notices shall contain: "(E) The name, address, and telephone number of a person whom interested parties may contact for instructions on how to obtain additional information ... available to the permitting authority that are relevant to the permitting decision." USEPA's Notice fails to designate an individual that may be contacted "for instructions on how to obtain additional information" as required by this section. Thus, USEPA's Notice is deficient and the Agency must remedy the deficiency and all other defects arising from the deficiency.

N. Veolia's Specific Incorporation of Other Public Comments

In addition to the comments set forth in this document, Veolia incorporates into these comments as though fully set forth herein, the affidavits and comments of the below listed individuals and requests that USEPA consider and respond to these affidavits and comments:

- Joint comments of William C. Anderson, Ph.D., Senior Analytical Project Manager, TestAmerica, Inc. and Chris E. McBride, P.E., Focus Environmental, Inc. VES 016777-016795;
- Robert W. Baxter, B3Systems, Inc. VES 016997-017002;

- Emma York, Evonik Manager, Environmental, Safety, Health and Security, VES 007596-007597;
- Ralph L. Roberson, President, RMB Consulting & Research Inc., VES 008290-008380;
- Michael Fuchs, Project manager in the Measurements Group in URS Corporation's Austin, Texas Office, VES 007598-7605 and VES 019283-019293.
- Doug Harris, General Manager at Veolia ES Technical Solutions, L.L.C., VES 008384-008391;
- Dennis J. Warchol, Veolia Manager of Environmental, Health and Safety, VES 008381-008383 and VES 019308-019309;
- Delana Owen, Franklin Engineering, VES 007606-007615; and
- The Comments offered by the Coalition for Responsible Waste Incineration offered in response to Veolia's 2014 Draft Permit as well as in response to USEPA's attempt to reopen Veolia's Permit in 2013 (VES 016961-016974).

V. Conclusion

For the reasons set forth above, Veolia requests that USEPA modify the Draft Permit in accordance with Veolia's comments.

Veolia's comments are offered by:

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